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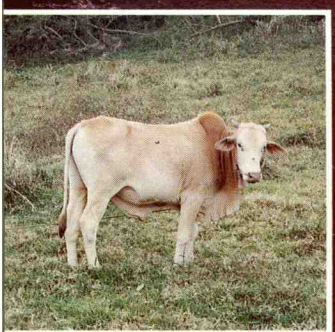
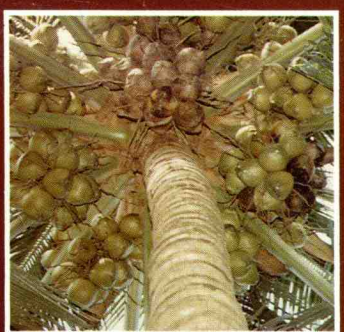
Marketing of Agricultural Commodities by Producer Groups in the Philippines

Edited by

Aida R. Librero and Anita G. Tidon






...ional Development Research Centre

...ne Council for Agriculture, Forestry
...l Resources Research and Development
...rtment of Science and Technology

OFFICE OF THE EXECUTIVE DIRECTOR

Dear Reader:

The formation of producer groups to undertake marketing functions is a cooperative strategy to minimize inefficiencies in the marketing system and to enable farmers to avail themselves of better returns to their produce. This strategy is resorted to as an alternative marketing scheme to fairly distribute market benefits to a wider number of market participants and help maintain the competitive structure of the market through pricing and efficient resource use.

This publication documents the marketing efficiency of farmers' organizations and rural-based marketing cooperatives. It presents an assessment of the implications of these groups on the social and economic well-being of farmers, as well as the impact of relevant policies and programs, support and other services on the performance and sustainability of these groups. This volume is intended to be a useful reference to all those involved in cooperative marketing.

Sincerely yours,

WILLIAM D. DAR
Executive Director

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INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

PHILIPPINE COUNCIL FOR AGRICULTURE, FORESTRY AND NATURAL RESOURCES RESEARCH AND DEVELOPMENT
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Foreword

Farmers and traders are two of the most important entities in the Philippine agricultural marketing system. Farmers are mostly price takers, thus, marketing cooperatives and producer groups (PGs) are viewed as alternative to make farmers better off because through collective action, they can market their products more efficiently and bargain for cheaper prices of production inputs. But how efficient are the cooperatives and PGs in performing marketing functions compared with private traders? What marketing services do these organizations provide to farmer-members? What marketing constraints and problems do they face? What are their coping mechanisms? What are the welfare effects of these organizations to the farmer-members?

To answer these questions, the Socio-Economics Research Division (SERD) of the Department of Science and Technology-Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (DOST-PCARRD), through the financial assistance of the International Development Research Centre (IDRC), conducted a research program on Marketing of Agricultural Commodities by Small Producer Groups in the Philippunes. The program analyzed the performance of various PGs and rural-based farmer-managed organizations engaged in marketing major agricultural commodities in the country. The program focused on major agricultural commodities of seven geo-political regions of the Philippines.

Six academic institutions participated in the program, namely: Isabela State University (ISU), Central Luzon State University (CLSU), the University of the Philippines Los Baños (UPLB), Camarines Sur State Agricultural College (CSSAC), Visayas State College of Agriculture (ViSCA), and the University of Southern Mindanao (USM).

This book presents the output of the research program. In conducting the research, a Program Advisory Committee was formed composed of representatives from the Cooperative Development Authority (CDA), Department of Agriculture (DA), National Economic and Development Authority (NEDA), and Land Bank of the Philippines (LBP). Likewise, a national workshop was organized by PCARRD in cooperation with the CDA and the LBP to disseminate the research findings and derive policy recommendations. Results are expected to provide valuable inputs to (a) policy makers in making modifications on existing policies to improve

the overall performance and economic efficiency of PGs performing marketing functions; and (b) researchers who may desire to conduct more intensive and broader studies on marketing by small PGs.

WILLIAM D. DAR
Executive Director

Acknowledgment

We wish to express our sincerest thanks and appreciation to the following for all the assistance provided to us in the conduct of this research program:

- IDRC for providing financial support and to Dr. John D. Graham for sharing his expertise and technical assistance;

- The Program Advisory Committee members:

  - Mr. Harold D. Dacumos, vice president, LBP,
  - Dr. Ma. Piedad Geron, former deputy director, Agriculture Staff, NEDA,
  - Dr. Vicente U. Quintana, former administrator, CDA,
  - Mr. Jose Manto and Mr. Rodolfo Guieb, senior agriculturists, DA,

  for their comments and suggestions in various stages of the project;

- All project and study leaders for their active participation and cooperation in conducting the program;
- Ms. Violeta Cordova for painstakingly reviewing individual reports at the early phase of report preparation;
- The management of the sample producer groups and the sample farmers, traders, and key informants for providing the needed information;
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- The Applied Communication Division (ACD) of PCARRD for its assistance in the production of the publication; and
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List of Acronyms

ACCI	- Agricultural Credit and Cooperative Institute
ARMM	- Autonomous Region for Muslim Mindanao
BAI	- Bureau of Animal Industry
BAS	- Bureau of Agricultural Statistics
CAR	- Cordillera Administrative Region
CARP	- Comprehensive Agrarian Reform Program
CAVALCO	- Cagayan Valley Cooperative
CBP	- Central Bank of the Philippines
CDA	- Cooperative Development Authority
CLSU	- Central Luzon State University
DA	- Department of Agriculture
DAR	- Department of Agrarian Reform
DBP	- Development Bank of the Philippines
DENR	- Department of Environment and Natural Resources
DOLE	- Department of Labor and Employment
DOST	- Department of Science and Technology
DSWD	- Department of Social Welfare and Development
DTI	- Department of Trade and Industry
DTRI	- Dairy Training and Research Institute
FAO	- Food and Agriculture Organization
FTI	- Food Terminal Incorporated
GATT-UR	- General Agreement on Tarriff and Trade-Uruguay Round
GFSME	- Guarantee Fund for Small and Medium Enterprises
GOs	- Government Organizations
GSIS	- Government Service Insurance System
GVA	- Gross Value Added
IFPRI	- International Food Policy Research Institute
ISU	- Isabela State University
LBP	- Land Bank of the Philippines
LEAD	- Livelihood Enhancement and Development Program
LGU	- Local Government Unit
LPI	- Lusak Project, Incorporated
MSTAP	- Municipal Science and Technology Advisory Program
MTLDP	- Medium-Term Livestock and Development Program
NAFC	- National Agriculture and Fishery Council
NAPHIRE	- National Postharvest Institute for Research and Extension
NCSO	- National Census and Statistics Office
NEDA	- National Economic and Development Authority

NFA	- National Food Authority
NFAC	- National Food and Agriculture Council
NGOs	- NonGovernment Organizations
NPGC	- Northern Philippines Grains Complex
NSCB	- National Statistical Coordinating Board
NSO	- National Statistics Office
PCA	- Philippine Coconut Authority
PCARRD	- Philippine Council for Agriculture, Forestry and Natural Resources Research and Development
PCIC	- Philippine Crop Insurance Corporation
PDC	- Philippine Dairy Corporation
PGs	- Producer Groups
PHILRICE	- Philippine Rice Research Institute
PRCRTC	- Philippine Root Crops Research and Training Center
R&D	- Research and Development
ROI	- Return on Investment
SCUs	- State Colleges and Universities
SEC	- Securities and Exchange Commission
SSS	- Social Security System
UCAP	- United Coconut Association of the Philippines
UPLB	- University of the Philippines Los Baños
USM	- University of Southern Mindanao
VISCA	- Visayas State College of Agriculture
WTO	- World Trade Organization

Part I

Introduction

Chapter 1

Marketing of Agricultural Commodities by Producer Groups: Conceptual Framework and Methodology

Aida R. Librero and Albert P. Aquino

Research Problem

Productivity improvement in Philippine agriculture is largely technology based. It causes a downward supply shift which enable relevant markets to supply more agricultural commodities at lower prices. However, while consumer benefits are discernible, increased producers' welfare due to technological innovations is less clear. A major reason for this is the prevailing marketing system for agricultural commodities.

Actual markets for most agricultural products are far from competitive and efficient implying that individual farmers (who are mostly price takers) cannot be assured of the highest price for their produce and the lowest price for farm inputs. At the same time, rent-seeking behaviors may widen the marketing margins over the normal profit levels, risks involved, and marketing costs.

The interest, therefore, on the performance of the marketing systems for various agricultural commodities stems from two key concerns. First, farmers bewail of their minimum share of the marketing bill. Second, there are claims of increases in marketing margins. The stickiness of farm prices is often blamed on unscrupulous traders exploiting the market. Burgeoning consumer demand leads to scrambled marketing, but traders are able to integrate their operations and, hence, able to capture additional returns. Because of large size, market control, however, emerges giving rise to imperfect markets.

The central issue is whether abnormal profits exist or costs have increased, the latter being due to added services or mere inefficiencies in the system. For the farmers, these ultimately redound to squeezed producer prices.

Inefficiency is supposed to have been brought about by a traditionally oligopsonistic market structure, both in the village and in urban areas

near production sites, among others. Inevitably, this results in aggregate welfare losses in which economic profit accrues mainly to traders and producers seem to lose more.

The implications of an oligopsonistic market are overriding. Are there barriers to entry which do not encourage more participants for profit to even, at least, approach competitive levels? Are existing producer groups (PGs) and marketing organizations only marginally efficient? Is their continued existence threatened even by the slightest manipulations of market factors? Empirically, what are the factors which critically affect marketing efficiency and long-term growth? What are the trade-offs between an efficient enterprise-oriented PG and welfare of farmer-members? Or can efficiency ultimately translate to improved farmers' income?

The incorporation of farmers' organization and formation of PGs to undertake marketing functions can be viewed as a cooperative strategy to minimize these inefficiencies in the marketing system and to enable farmers to avail themselves of better returns to their produce. This strategy is resorted to as an alternative marketing scheme to fairly distribute market benefits to a wider number of market participants and help maintain the competitive structure of the market through pricing and efficient resource use.

It is in this light that one must document and analyze the marketing efficiency of farmers organizations and rural-based marketing cooperatives. As an empirical exercise, one must also determine and assess the implications of these farmer-groups/marketing associations on the social and economic well-being of farmers. The magnitude of the impact of relevant policies and programs, support services, and physical infrastructure on the performance and sustainability of these groups must be studied in depth. Lastly, an analysis of the marketing problems and constraints must be able to detail some possible microlevel solutions, as well as recommend appropriate macropolicies and development programs aimed at improving cooperative marketing in the Philippines.

Objectives of the Study

The study aims to analyze the performance of various PGs and rural-based farmer-managed organizations engaged in marketing major agricultural commodities in the Philippines.

Specifically, it aims to:

1. provide an overview of the production-marketing-consumption systems for selected agricultural commodities;

2. determine and analyze the various marketing services performed over time by PGs on major agricultural commodities;
3. evaluate and compare the marketing efficiency of these organizations with alternative marketing channels/commodities;
4. identify and determine the effects of existing support services and other related infrastructure, and policies on PGs;
5. analyze the various marketing constraints and problems and determine the PGs' coping mechanism;
6. evaluate the impact of these marketing groups/organizations on the social and economic well-being of farmers;
7. recommend some policy agenda/actions to improve the overall performance and economic efficiency of these marketing groups; and
8. develop possible research-policy linkages to enhance research results utilization.

Hypotheses of the Study

The hypotheses of the study are:

1. PGs and other cooperatives engaged in agricultural marketing are as efficient and effective as the existing channels;
2. PGs enable farmers to capture a greater portion of the marketing margin;
3. performance of PGs is dependent on effective management of collective action; and
4. existing government policies and programs related to marketing and distribution are biased towards larger volume of business.

Conceptual Framework

An efficient marketing system is the most important multiplier of economic development (Drucker as cited by Abbott 1987). The marketing system links sellers and buyers and its dynamic role stimulates output and consumption; it creates and activates new demands by improving and transforming farm products and by seeking new customers and new needs; and it guides farmers towards new production opportunities and encourages innovation and improvement in response to demand and prices (Abbott 1987).

An efficient agricultural marketing system can, therefore, move farmers' produce from production sites to ultimate consumers at least

cost and where margins only exist to reflect normal profits, risks involved, and services performed on the product. However, consumers feel that retail prices are not reflective of the value added on the product and farmers feel that farm gate prices have been perennially low, the latter becoming a disincentive to continued tilling of the land.

Depressed producer prices are a result of the interplay of various factors affecting a complex marketing system. Price taking at the farm gate, which usually results in low prices, is a manifestation of existing marketing structure and conduct. Collective action among farmers is, therefore, seen as a means by which they can obtain a strategic posture in price setting and in general, for a more active performance of some marketing functions.

In analyzing the marketing functions of small PGs, three aspects are central to the study: (1) economics of collective action; (2) marketing efficiency of PGs; and (3) welfare implications of collective action in marketing.

This section provides some theoretical underpinnings, as well as an analytical framework in studying three aspects which are central to the theme of the study. These are: (1) economics of collective action; (2) comparative efficiency of PGs and alternative marketing channels; and (3) welfare implications of collective action in marketing.

Economics of Collective Action

The basic characteristics that distinguish a cooperative from other businesses are that: (1) it is owned, controlled by, and intended to benefit its members rather than outside investors and (2) its economic essence is expressed through the need for vertical integration among independent producers (Sexton and Iskow 1988). Sexton and Iskow defined agricultural cooperation to represent coordination of producers to achieve mutual vertical integration. "By banding together in a cooperative, farmers who each has the incentive to vertically integrate can jointly overcome the vast scale discrepancies that normally will exist between the farm sector and the upstream or downstream industries". A parallel view is provided by Doherty and Jodha (1977) who emphasized that the potential for collective action is high if the PG can provide an organizational good (or service) which potential beneficiaries can avail themselves of once they organize.

Competitive markets are certainly the most efficient avenues to transact business and in this case, establishment of PGs to engage in marketing may not provide better prices and incentives for the producer-members. Only when there are imperfect markets and/or market failure (where markets are inadequate to provide competitive prices) may farmers be enticed to transact business through a cooperative.

Marketing Efficiency of PGs

An analysis of marketing margin can help in understanding marketing efficiency and farm price determination. Sexton and Iskow (1988) indicated that the maximum farm gate price P, given a marketing margin M and retail price P, is:

$$P = (P - M)/K \qquad \text{Equation 1}$$

where **K** is the conversion factor indicating the number of units of the farm commodity needed to produce a unit of the retail commodity. As cited before, competitive markets will ensure that the various prices and margin are efficiently determined. In cases of imperfect markets, Equation 1 can indicate how marketing cooperatives can make farmers better off. Sexton and Iskow pointed that farm prices can be increased by cooperatives by having cheaper marketing cost relative to noncooperative arrangements, counterbalancing market powers of certain firms which depress farm gate price and/or increase retail prices.

Aside from this pecuniary benefit, marketing through a cooperative can cushion temporal price variability which may contribute to farm income instability. There are also cases when no private handler is available to purchase farm products and the establishment of a marketing cooperative among farmers is seen as an option to move these products to the desired outlets.

Margin reduction can be achieved by the cooperative when it is able to bargain for cheaper prices for inputs used in marketing and if it can market the product more efficiently than existing channels (Sexton and Iskow 1988). While input markets may offer the same price irrespective of whether the buyer is a cooperative or not, Sexton and Iskow argued that net income may be higher for a cooperative than a private firm because of differential taxation scheme in favor of the former. Because of special loaning windows in selected banks, a cooperative may be able to secure cheaper debt capital than some private firms which have to rely on commercial lending rates.

More efficient marketing may result in lower margin if vertical integration can make way for internalized transactions (Sexton and Iskow 1988). Internal transaction is made possible in cooperatives because of goal compatibility, i.e., farmers' desire for higher producer prices is also an expressed goal of the cooperative, and its ability to internally resolve conflicts.

Welfare Implications of Collective Action in Marketing

The benefits from collective action can be gleaned from a more strengthened bargaining farmers' position through collective action in dealing with the various traders in a multitier marketing system. As the PG performs more marketing functions, farmers benefit through discounted fees for customary services, e.g., processing and storage, lesser marketing cost, and profit sharing, among others. Auxiliary services may be provided through credit and financing at lower than market rates, technical assistance, and training, among others.

Data Collection

The research focused on major agricultural commodities of seven geo-political regions of the Philippines, namely:

Region		*Commodities Covered*
Region II	- Cagayan Valley	Rice, corn, and banana
Region III	- Central Luzon	Rice, onion, and swine
Region IV	- Southern Tagalog	Coconut, corn, cattle, and swine
Region V	- Bicol	Rice, coconut, and swine
Region VIII	- Eastern Visayas	Coconut, sweetpotato, and cassava
Regions XI & XII	- Central and Southern Mindanao	Rice, corn, and fruits

The choice of commodities was largely dependent on the importance of the agricultural commodity in the area and the presence of a considerable number of PGs and marketing cooperatives that marketed these commodities.

The breakdown of sample respondents is shown in Table 1.1. Five PGs were selected in each region, except for corn in Region II where there were only four samples, for a total of 89. There were 2,063 farmer-members and 1,146 nonfarmer respondents. Trader respondents numbered 61.

Although a common conceptual framework and methodological approach generally underlie each of the regional studies, there were differences in coverage of issues and data used. For Southern and Central Mindanao, PGs were not only marketing several fruits, but also seedlings, while in Cagayan Valley, PGs were only handling banana fruit.

Table 1.1. Number of sample respondents by commodity and region.

Commodity Grouping	Region	Producer Groups	Traders	Farmer-Members	Farmer-Non-members
1. (a) Onion	III	5	12	152	53
(b) Root Crops	VIII	5	22	77	46
(c) Fruits	II	5	9	138	125
	XI & XII	5	46	68	52
	Total	20	89	435	276
2. (a) Rice	II	5	5	150	125
	III	5	15	152	62
	V	5	11	137	70
	XI & XII	5	43	100	50
	Total	20	74	539	307
(b) Corn	II	4	7	105	86
	IV	5	8	101	50
	XI & XII	5	50	100	50
	Total	14	65	306	186
(c) Coconut	IV	5	11	103	48
	V	5	14	131	67
	VIII	5	14	83	49
	Total	15	39	317	164
3. (a) Cattle	IV	5	16	94	50
(b) Swine	III	5	15	152	52
	IV	5	18	100	50
	V	5	12	120	61
	Total	20	61	358	221

Data were gathered from primary and secondary sources. Primary sources of information were surveys and case studies of selected PGs. Published and unpublished research reports and policy documents were reviewed to provide an initial assessment of the Philippine experience on marketing by PGs and cooperatives.

Sampling

Five PGs dealing on the commodity were purposively selected from a composite list of those marketing the commodity in the province/region. The list was obtained from the Land Bank of the Philippines (LBP), Cooperatives Development Authority (CDA), Department of Agriculture (DA), and various municipal government

units. For comparison, traders and other marketing channels involved in the same marketing function and commodity within the same geographical area were also sampled.

Farmer-members and nonmembers were randomly sampled. Roughly, 20 members plus another 10 percent of total membership were used as the sample size per PG. The sample size for nonmembers was fixed at 50 percent of total member respondents.

Data Analysis

The analytical framework and specific methodologies used in achieving the different research objectives are presented below:

1. *Provide an overview of the production-marketing-consumption system.*

   This is a synthesis of salient findings of previous marketing studies. Most of these studies focused on providing baseline information which the research program used as take-off points in assessing the structure, conduct, and performance of specific commodity markets. Chapter 2 provides an integrated report of the individual synthesis done by the various regional studies.

2. *Determine and analyze the marketing services performed by PGs across time.*

   Changes in services performed over time by both PGs and traders were determined. These were used to assess the extent of vertical integration of the different PGs.

3. *Evaluate the marketing efficiency of PGs.*

   Comparison of marketing margin and cost provides a direct test of marketing efficiency. It is also effective in testing the lack/presence of monopoly or monopsony profit (Hayami and Kawagoe 1993). However, Hayami and Kawagoe cautioned that the cost must be minimum from society's standpoint. Hence, this research tried to decompose marketing efficiency by measuring indices for operational and pricing efficiency to provide clues on monopsony profits (if ever) and marketing cost.

   Operational efficiency was gauged in terms of marketing cost incurred, extent of capacity utilization (for those engaged in

storage), and magnitude of losses, e.g., spoilage, spillage, and shrinkage. On the other hand, pricing efficiency was measured in terms of the marketing margin between two points in the chain, temporal price variations, and profitability. Since both operational and pricing efficiencies had bearings on the financial performance of the producer groups as business enterprises, some measures of financial viability were also calculated.

4. *Assess the effects of support services and policies on marketing performance.*

As with Hayami and Kawagoe (1993), the research program assumed that "... the role of the government is to foster easy entry into trading by improving rural infrastructure, providing marketing information as widely as possible, developing reliable and appropriate property rights and contract mechanisms with grades and standards, and by staying out of business themselves (Timmers' foreword to Hayami and Kawagoe 1993)."

The impact of support services and policies was, therefore, reckoned in terms of improvements in volume handled, increase in marketable surplus, minimization of marketing costs, and increase in the market share of the PG. Policy changes affect marketing efficiencies of cooperatives and comparison of margins across time to determine efficiency must factor in these policy effects to provide a more accurate reading of the relevant agricultural marketing system (Shepherd 1993).

5. *Analyze marketing constraints/problems and identify coping mechanisms.*

While this was largely qualitative, a causal analysis was done to pinpoint major bottlenecks (and their interrelationships) in the PGs' marketing operations. Coping mechanisms resorted to by the various PGs were also emphasized.

6. *Evaluate the welfare effects of PGs on farmer-members*

There were two areas of analysis done: (a) member versus nonmember availing themselves of the PGs' services and (b) member of a PG, but availing of the services of both the PG and trader.

Benefits from membership may take the form of patronage refunds, higher output prices, lesser marketing cost, and

differential fees for customary services, among others. These were estimated from survey results.

Qualitative measures of impact were documented. This may be in terms of changes in: (a) perceptions on marketing, entrepreneurship, and cooperative marketing; (b) knowledge and skills; and (c) attitudes.

7. *Strengthen research results utilization and policy advocacy.*

Objective Nos. 7-8, although more action rather than research objectives, were spelled out to emphasize advocacy stance of the entire research program.

Scope of the Report

After the conceptual framework and methodology, a macrooverview of the various commodities covered by the study will be presented. This will be followed by discussions of the results of the various studies. Chapter 11 integrates the major findings of the entire research program and major policy recommendations.

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Chapter 2

A Macro Overview of the Production-Marketing-Consumption Systems for Agricultural Products

Aida R. Librero and Anita G. Tidon

This chapter presents an overview of the production-marketing-consumption systems of the commodities included in the study. These are rice, corn, coconut, fruits (banana and mango), root crops (sweetpotato and cassava), onion, and livestock (swine and cattle).

Rice

Production

Rice, the most important food crop in the country, occupies 3.42 million ha and contributes 15 percent to the Gross Value Added (GVA) in agriculture. As a staple food, attainment of rice self-sufficiency remains an important policy objective of the government.

From 1970 to 1977, the country achieved increases in production because of the combined effect of increases in area harvested and yield (Fig. 2.1). The period was characterized by the expanded utilization of high-yielding varieties and availability of subsidized credit under the Masagana 99 rice program. Starting 1978, however, area harvested began to stagnate, but yield continued to increase. Production was highest in 1994 because of the relatively higher yield (2.89 mt/ha) compared with the previous year, plus an 11 percent expansion in area harvested. Almost the same production level was obtained in 1995 attributed to a slight increase of about 3 percent in area planted. Yield declined by about the same percentage. In

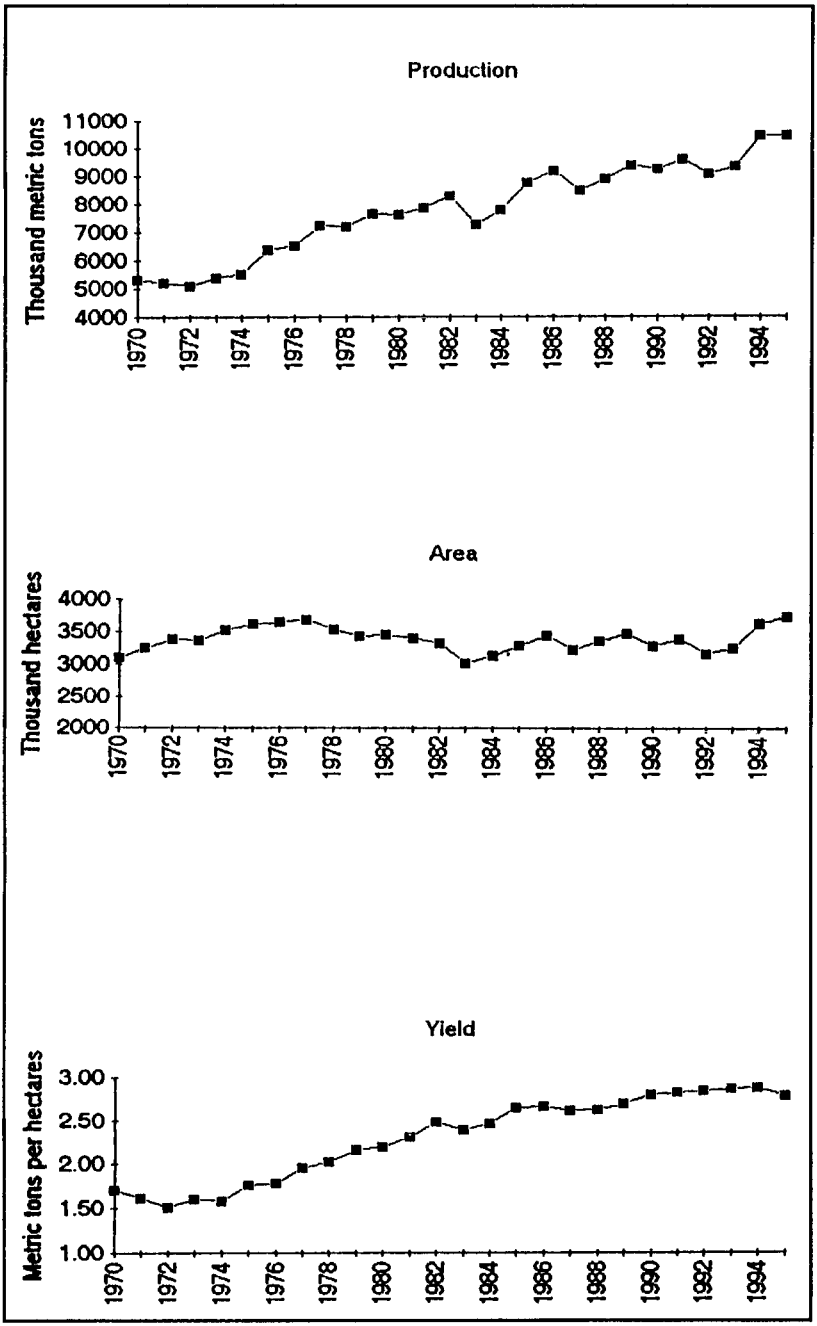

Fig. 2.1. Palay production, area, and yield, Philippines, 1970-1995.

general, the country has yet to achieve further production increases given the current low yield of 2.8 mt/ha compared with the potential yield in on-farm trials of 6 mt/ha.

Among the regions, Central Luzon, Cagayan Valley, Southern Tagalog, and Western Visayas contribute the largest share of the total rice production (Table 2.1).

Utilization and Consumption

Farmers usually dispose their rice crop shortly after harvest and more often than not are unable to retain a volume sufficient to meet family consumption requirement until the next season. About 66.8 percent of a farmer's produce is sold and 29.18 percent is kept for family consumption. The rest, 3.72 percent, is used for seeds and 0.05 percent for feeds (David n.d.). Rice per capita consumption has decreased slightly and this is traced to the availability of substitutes such as noodles and bread and the increasing consumption of other products such as fruits, vegetables, fish, and meat.

Table 2.1. Regional palay production and area, 1995.[a]

Region	Production	Percent	Area	Percent
	mt		mt/ha	
CAR[b]	193,221	11.8	76,387	2.5
Ilocos	886,517	8.4	322,964	2.7
Cagayan Valley	1,349,258	12.8	403,111	3.3
Central Luzon	1,757,425	16.7	547,562	3.2
Southern Tagalog	992,760	9.4	410,168	2.4
Bicol	598,618	5.7	281,263	2.1
Western Visayas	1,291,275	12.2	468,290	2.8
Central Visayas	230,759	2.2	112,630	2.0
Eastern Visayas	446,057	4.2	206,448	2.2
Western Mindanao	345,489	3.3	120,965	2.9
Northern Mindanao	357,260	3.4	98,156	3.6
Southern Mindanao	610,038	5.8	183,361	3.3
Central Mindanao	752,426	7.1	223,397	3.4
ARMM[c]	327,187	3.2	157,619	2.1
CARAGA	402,359	3.8	146,330	2.7
Total	10,540,649	100.0	3,758,651	2.8

[a] Bureau of Agricultural Statistics (BAS).
[b] CAR - Cordillera Administrative Region.
[c] ARMM - Autonomous Region for Muslim Mindanao.

Distribution Channels

From the farm to the end users, rice/palay is distributed primarily by the private sector. The government handles a very small portion of the palay/rice that enters the marketing system. From the farm to the consumption point, the movement of rice/palay through private traders is made possible by numerous market intermediaries (local assemblers, assembler-wholesalers, millers, wholesalers, wholesalers-retailers, and retailers) performing different marketing services. Assembly points and buying stations are established by the traders in rice areas where millers purchase palay. Milled rice is delivered by wholesalers to markets or trading centers such as Manila, Cebu, and Davao. Wholesalers may sell to other wholesalers or to retailers. Then retailers supply rice to end users or consumers.

As of 1993, the National Food Authority (NFA) has in its registry 4,298 wholesalers; 12,844 millers; 8,993 warehouse operators; and 62,583 retailers (David n.d.). About 16,530 were registered to engage in both rice wholesaling and retailing. These intermediaries have organized themselves into various associations, among them are: (1) Confederation of Grains Retailers Associations, Inc., organization of grain retailers associations; (2) Philippine Confederation of Grains Associations, Inc., consisting of grain warehouse owners, millers, processors, and traders/wholesalers; (3) the National Farmers' Action Council, composed of national leaders of farmers' cooperatives/ organizations; (4) the Quedan Operators' Organization of the Philippines, composed of quedan accredited millers, wholesalers, retailers, and farmers' cooperatives.

The government sector's distribution channel is made possible by NFA, the grains marketing arm of the government. During the lean months of July, August, and September, NFA sells rice through its accredited retailers and institutions such as government offices and charitable, civic, and religious institutions. During harvest months, NFA sets up buying stations in strategic areas and buys palay at a given support price. Because of its limited budget, NFA can purchase only 5 to 10 percent of the total palay production.

Rice Prices and Pricing Policies

Farm and retail prices of rice exhibited gradual increases through the years (Fig. 2.2). Retail and farm prices in January 1995 were 48 and 31 percent higher, respectively, than the 1990 level.

With the wide fluctuation in rice prices, the government, through the NFA, intervenes in the rice pricing mechanism both at the retail and farm levels to stabilize prices. The government's pricing policy involves setting

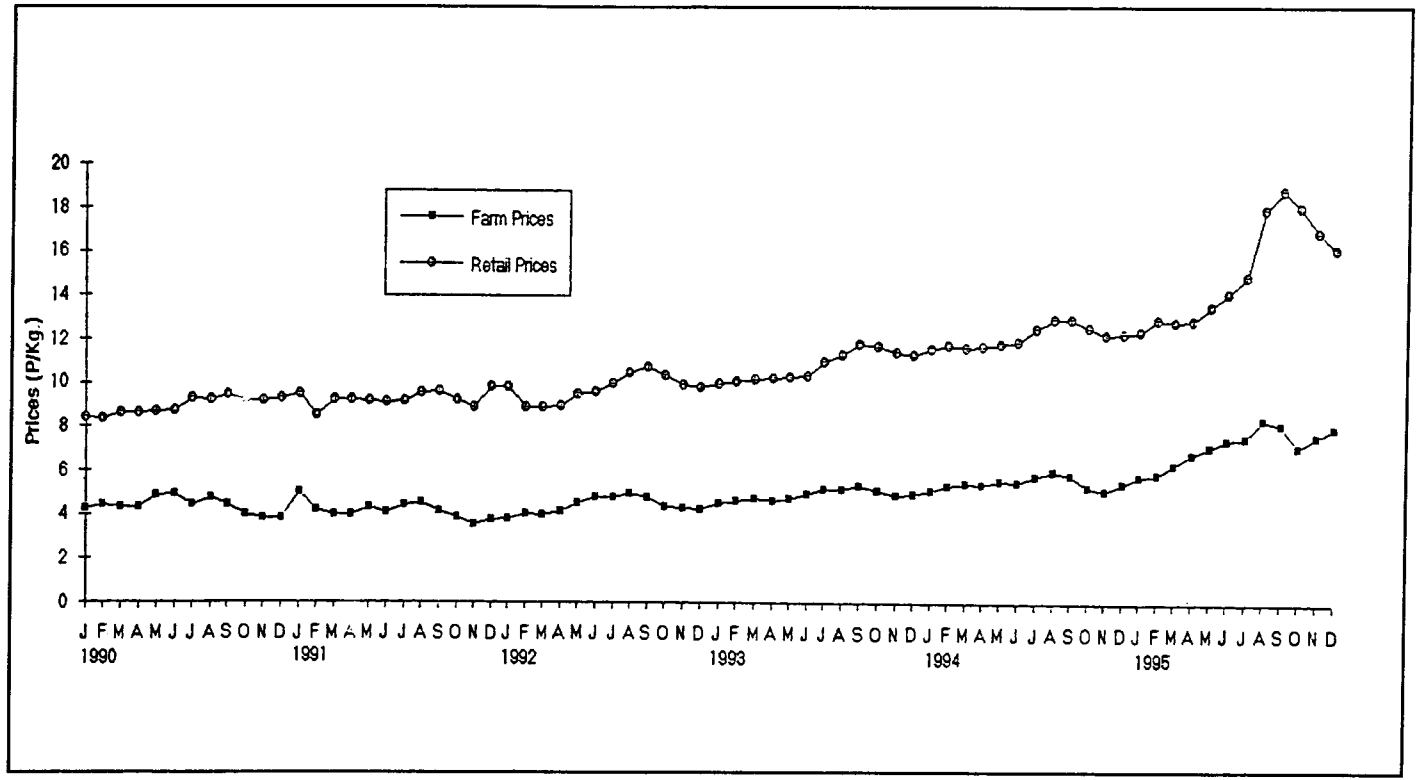

Fig. 2.2. Farm and retail prices of rice per month, 1990-1995.

and defending the support and ceiling prices to influence farm prices to be high enough to encourage the farmers to increase farm productivity and for retail prices to be low enough and within the reach of the consumers (Chupungco 1991).

The palay procurement program of NFA aims to influence the farm market price, that is, it buys palay from farmers so as to raise their selling price at the support price level. The rice distribution program, on the other hand, prevents retail price increases beyond the ceiling level, thereby, providing protection to consumers.

The effectiveness of the government rice pricing policy has been evaluated by several economists (Intal et al. 1987; Lantican and Unnevehr 1987). Umali (1988) indicated that the "government was more successful in defending consumer price ceilings than the farm price floor." The average palay farm prices have been lower than the support price levels, yet the retail price levels almost approximate the ceiling prices. Pabuayon and Sumalde (1992) shared the same observations and pointed the unavailability of postharvest facilities at the farm so that farmers could not sell quality palay and, therefore, are unable to take advantage of the premium price offered by NFA. Moreover, NFA's palay procurement is limited to 5 percent of palay production because of budgetary constraints. Procurement was concentrated in major rice-producing areas such as Central Luzon, Cagayan Valley, Southern Tagalog, and Western Visayas which altogether account for 65 percent of the total palay procurement. With limited beneficiaries, Pabuayon and Sumalde concluded that the NFA procurement program failed to bring about a general increase in the level of farm price.

Price ceilings, on the other hand, are imposed only when needed to suppress the retail prices at levels affordable to consumers. With gradual deregulation of the rice market in recent years, the price ceiling is lifted when necessary, that is, when the actual retail prices are below the ceiling prices. Thus, it remains a policy of the government to protect the consumers through occasional imposition of price controls when the need arises.

Policy Issues

The past administration had somehow succeeded in increasing rice production to its peak level of 10.54 million mt in 1994, higher than the record crop of 9.68 million mt produced in 1981. In 1995, the country experienced production shortfalls during the first half of the year as a result of reduction in area planted and because of a series of natural calamities such as droughts. The area planted was attributed partly to the decrease in public investments in irrigation which has been consistently

less than 5 percent of the national budget. Not to be discounted is the impact of massive conversion of agricultural lands into industrial areas as the government shifts its focus on agro-industrialization as venue of economic growth and change. These have resulted in the importation of rice from ASEAN neighbors.

Agricultural economists project that the country will continue shifting from being a marginal rice importer to marginal exporter and vice-versa. However, much remains to be done to cope with the country's expected rice requirement of 7.2 million mt by the year 2000. Since the country appears to have reached its cultivable frontier, increases in production can only be expected from higher yields which can only be achieved through the provision of incentives and support services to encourage farmers to use improved rice technologies. Such incentives include credit, certified seeds, fertilizers, and chemicals which must be made available and accessible to the farm on time. With the failure of the deregulation policy to depress fertilizer prices, the use of organic fertilizer must now be vigorously promoted. Production of certified seeds must also be intensified taking into consideration the acceptability of the variety. Losses in postharvest processing have to be minimized by establishing postharvest facilities.

The formation of new and strengthening of existing farmers' organization and cooperatives must be strongly pursued to serve not only as conduits of government incentives (e.g., credit, fertilizer support), but as marketing arm that could bargain for premium prices of farm produce. They can also lobby from policy makers for better incentives that would benefit the rice farmers.

The issues on rice pricing and marketing have to be resolved. A full and proper funding and implementation of the rice price standardization program of NFA should be pursued. However, extension and support services such as road infrastructure and transport facilities must be improved. Moreover, the level of investment in irrigation must be increased. Rehabilitation and maintenance of existing irrigation system must be stepped up, while efforts should be made to put up more shallow well pumps and small water impoundments in major rice-producing areas.

Corn

Corn is the second most important staple crop in the country. A large segment of the population in Cagayan Valley, Visayas, and Mindanao considers it as a staple food like rice. Corn is an important ingredient in livestock and poultry feed.

Production

Corn is largely grown in Mindanao which occupies about 60 percent of the entire area harvested to the crop over the last 3 years (Fig. 2.3). The combined output from Mindanao represents about 70 percent of the country's total corn production.

Corn cropping is done mostly once a year with peak harvests occurring between July and December. Increases in production have been noted between 1983 and 1989, but the drought (El Niño) in 1990 caused a 4 percent drop in production during the year (Fig. 2.4). Since then, production and hectarage gradually declined reaching 4.12 million mt in 1995 from an area of 2.7 million ha. Between 1990 and 1995, the country has lost 1.12 million ha either to commercial crops and/or land conversion. Since 1990, corn hectarage had been declining at an annual rate of 6.7 percent and production by 3.09 percent. Yield/ha of corn has increased only very slightly (Fig. 2.5).

Utilization and Consumption

The main bulk of corn supply is used as livestock feed (63%). Another significant portion (20%) goes to direct human food consumption, while a small portion is used for industrial uses as seed for the next cropping period (12%) (Table 2.2).

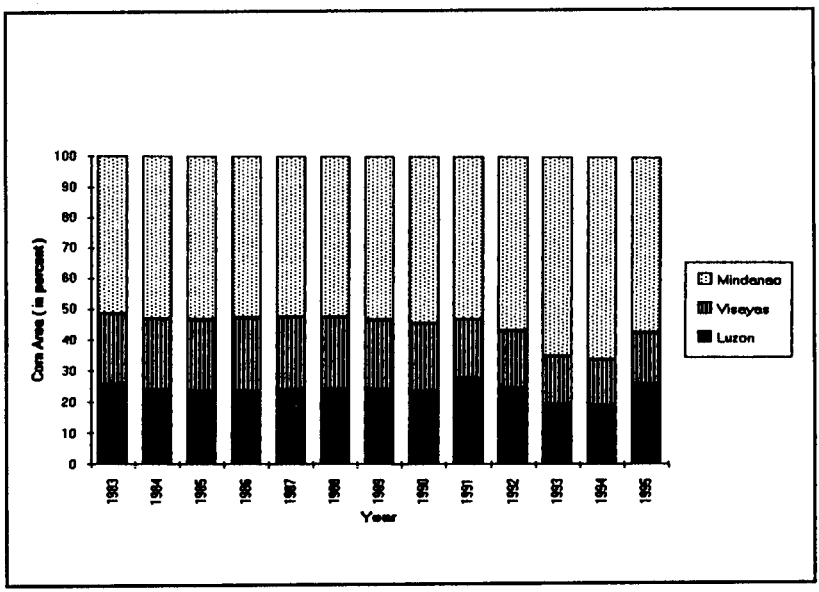

Fig. 2.3. Corn area by island group, 1983-1995.

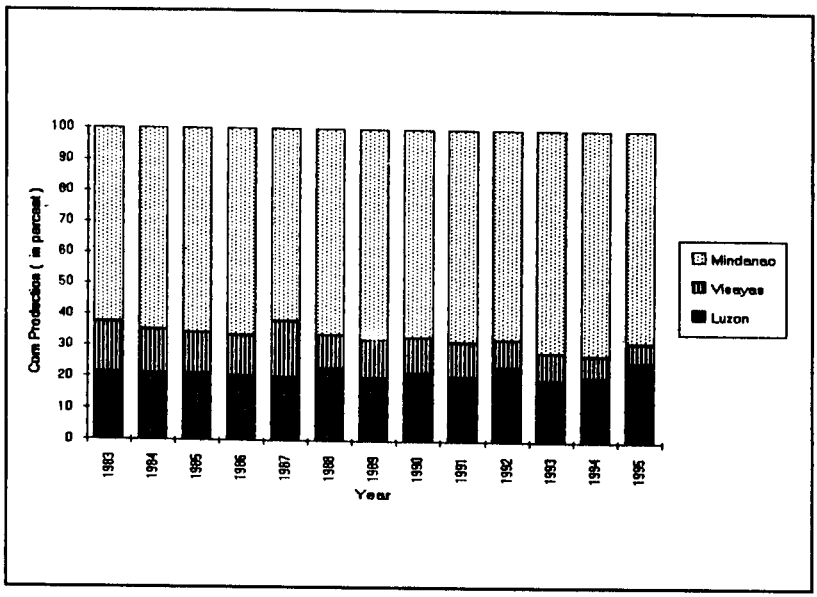

Fig. 2.4. Corn production by island group, 1983-1995.

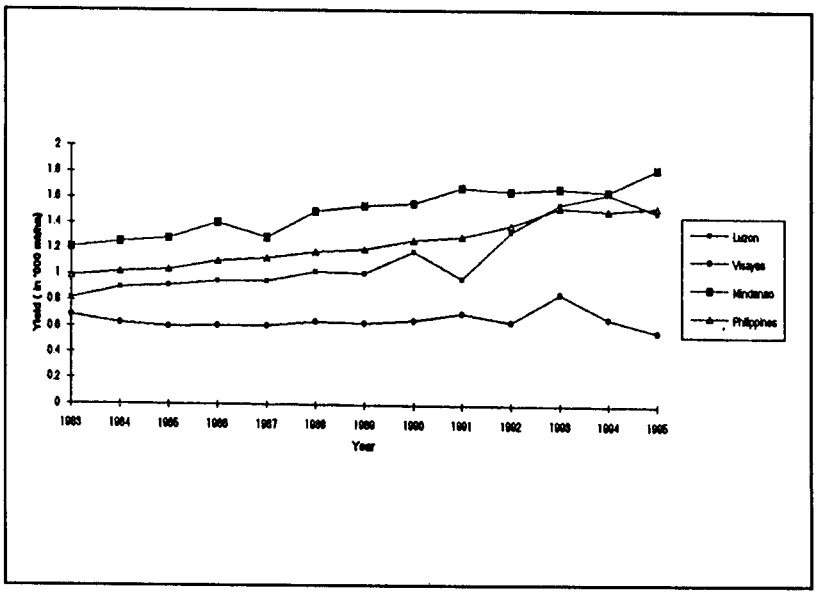

Fig. 2.5. Corn yield, Philippines, 1983-1995.

Table 2.2. Corn supply and use, Philippines 1980-1994 ('000 mt).[a]

Year	Supply				Utilization					
	Beginning Stock	Production	Imports	Gross Supply	Exports	Seeds	Feeds & Wastes	Processing	Food Use Total	Food Use Per Capita
1980	258.00	3050.00	250.00	3558.00	0.00	64.00	2118.00	152.00	1005.00	20.80
1981	219.00	3296.00	253.00	3768.00	0.08	66.00	2313.00	164.00	988.92	19.96
1982	236.00	3404.00	341.00	3981.00	0.01	68.00	2485.00	170.00	993.99	19.57
1983	264.00	3134.00	528.00	3926.00	0.03	63.00	2436.00	156.00	951.97	18.29
1984	319.00	3250.00	182.00	3751.00	0.11	64.00	2393.00	162.00	949.89	17.80
1985	182.00	3863.00	281.00	4326.00	0.27	70.00	2631.00	194.00	999.73	18.29
1986	431.00	4091.00	0.20	4522.20	0.14	72.00	3036.00	205.00	968.06	17.29
1987	241.00	4278.00	56.00	4575.00	0.24	74.00	3039.00	214.00	1017.76	17.74
1988	230.00	4428.00	25.00	4683.00	0.07	75.00	3067.00	221.00	1026.93	17.49
1989	293.00	4522.00	173.00	4988.00	0.08	74.00	3195.00	231.00	1349.92	22.46
1990	138.20	4854.00	345.50	5337.70	0.09	76.00	3434.00	244.00	981.61	15.97
1991	601.50	4655.00	0.32	5256.82	20.07	71.79	3365.05	247.12	1090.49	17.34
1992	462.30	4618.85	0.62	5081.77	0.04	0.00	3002.25	616.15	1228.22	19.11
1993	235.10	4798.00	0.67	5033.77	0.02	0.00	3118.70	640.03	1067.30	16.31
1994	207.70	4519.25	0.89	4727.84	0.04	0.00	2937.51	602.87	971.02	14.32
1995	217.30	4128.51	133.71	4479.52	0.06	53.85	2683.53	550.75	1001.94	14.26

[a] BAS.

The average per capita food consumption of corn is about 15 kg/year. The demand for corn as feed depends on the growth of the livestock industry. Corn is closely linked with the livestock industry largely because it comprises about 60-70 percent of the livestock feed formulation. The rapid growth of the latter in recent years has put tremendous pressure among the livestock and corn producers and feed manufacturers. Since 1985, both poultry and swine have exhibited dramatic growth in production which clearly was unmatched by the growth in corn production (Fig. 2.6) (Librero and Brown 1995). Corn shortages are often encountered by noncommercial and small-scale feed millers, especially during the dry season. Commercial feed manufacturers, on the other hand, have to resort to importation. Henceforth, in cases of production shortfalls, calls for importation could be expected most especially from the livestock feed manufacturers.

With the production shortfalls arising from declining hectarage, the country has been importing corn to meet local demand. Even with the import ban on corn imposed from 1986 to 1988, feed millers were able to import limited volumes during the period. The ban was lifted in 1989. Corn importation during the period was 173 thousand mt and some 354 thousand mt in 1990. From 1980 to 1992, the country imported an average of 200 thousand mt of corn per year (Librero and Brown 1995).

Distribution Channels

The major demand areas for corn are Metro Manila, Central Luzon, Southern Tagalog, and Central Visayas (Cebu) where feed mills and livestock and poultry industries are concentrated.

In general, the major corn flows are as follows: (a) from Cagayan Valley to Metro Manila via land transportation and (b) from Southern and Northern Mindanao corn belt areas to Cebu and/or Metro Manila via interisland shipping. All corn produced in Luzon are sold in Manila. Based on the 1990 IFPRI survey, corn passes through various intermediate wholesale trading centers before finally reaching the major wholesale markets of Cebu and Manila. Likewise, Cebu serves as an intermediate market for corn eventually destined to Manila. Some processed corn grits are also shipped back to Mindanao from Cebu.

High costs of transportation, inadequate transportation facilities (e.g., insufficient trucks), and poor farm-to-market roads impede the rapid flow of corn from farm-to-market centers. Carabao or cow-drawn carts, sleds, and horses are still used to transport corn from many interior villages. This inefficient mode of transport takes a longer time and transports lesser volume of corn.

The type of road determines transport cost. Table 2.3 shows that it costs P7.50 to transport a metric ton of grains for every kilometer of

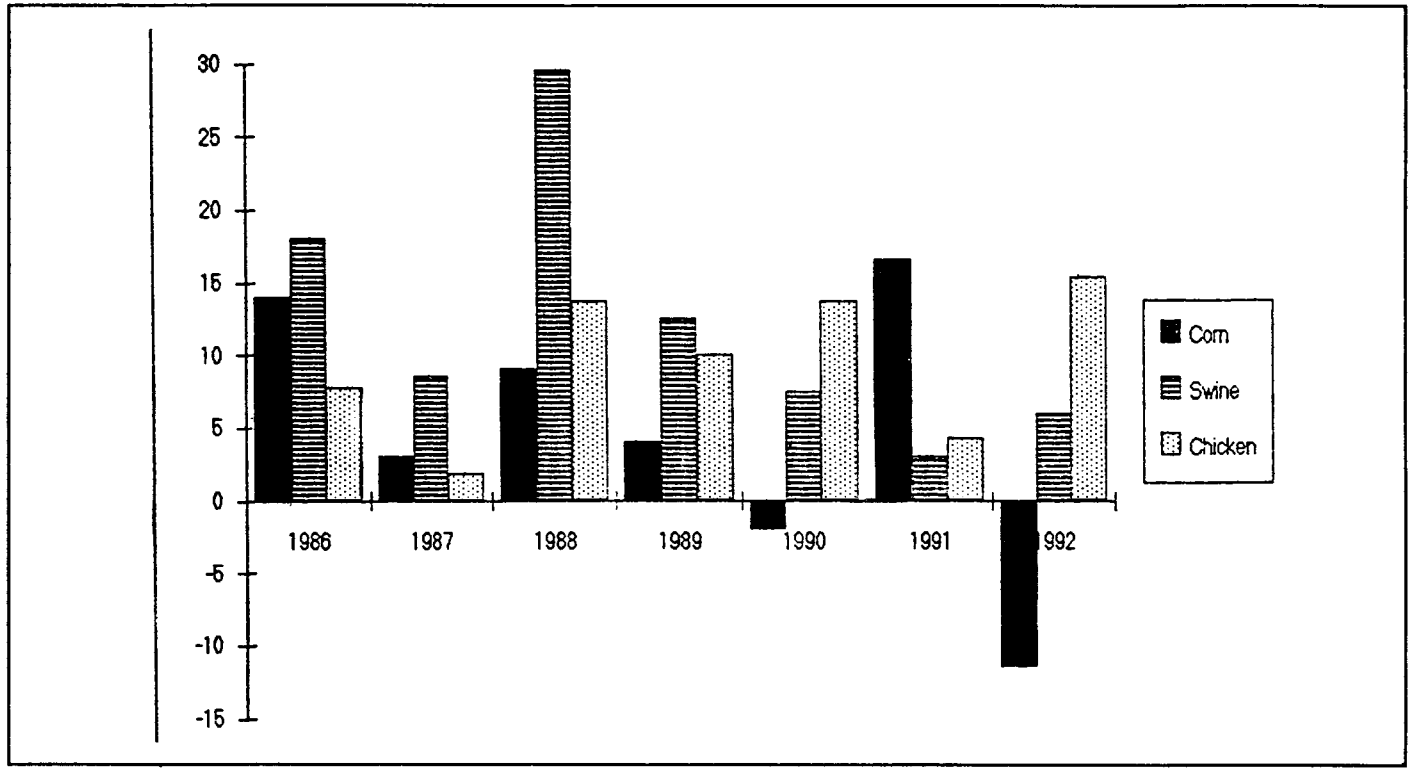

Fig. 2.6. Growth rates in production of corn, swine, and chicken, Philippines, 1986-1992.

Table 2.3. Comparative farm-to-market transport costs for grains in selected provinces, Philippines, 1987.

Location	Typical Distance (km)	Common Vehicle Types Used	Average Transportation Cost (P/mt/km)	Remarks
North Cagayan	30	UVs, light trucks	2.00 - 3.00	50% rough roads
South Cagayan	30	Light to heavy trucks	0.80	relatively good but unpaved roads
North Isabela	10	Light to heavy trucks	1.20	70% rough roads
West/South Isabela	50	Light to heavy trucks	1.20 - 1.60	75% rough roads
Nueva Ecija	30	UVs, light trucks	1.60	relatively good but unpaved roads
Iloilo	14	UVs, light trucks	4.00	60% rough roads
Misamis Oriental/ Bukidnon	20	Light to heavy trucks	1.40 - 4.20	highest cost for rough roads and mountainous terrain
Davao	30	UVs, light trucks	6.00	92% rough roads
North Cotabato	50	Light to heavy trucks	5.00	93% rough roads and damaged highway pavements
South Cotabato	10	UVs, light trucks	5.00	59% rough roads
Sultan Kudarat	10	UVs, light trucks	7.5	97% rough roads

[a] Serrano 1992.

97 percent rough roads in Sultan Kudarat. In contrast, transporting the same volume over a relatively good unpaved road in South Cagayan costs only P0.50/km.

Because of high transport costs, corn is generally picked up from the farm by traders who are either wholesalers, wholesaler-retailers, and broker or commission agents. Most of the corn drying is done at the trader's level.

Distribution inefficiencies have tremendous effect on the competitiveness of the corn industry, particularly if the geographical concentration of corn production and consumption. Mindanao accounts for close to 90 percent of total production (Fig. 2.7). In contrast, the largest portion of chicken and swine production comes from Luzon which accounts for more than 80 percent and close to 50 percent of total chicken and hog production, respectively. Fig. 2.8 shows the regional location of major corn production and utilization.

The cost of marketing and distribution of corn in the Philippines is 70 percent higher than that in Thailand. Although corn farmers in the Philippines are located closer to a local market than farmers in Thailand, better rural infrastructure in the latter enables them to have easier access to alternative markets. A key innovation in corn marketing and distribution in Thailand is the use of bulk handling even from small regional markets. (Rosegrant and Gonzales 1991).

Corn Prices and Pricing Policies

Corn prices at the farm level are set up by the buyers and seldom do the farmers and traders negotiate the price. "Prevailing market price" in urban centers is usually the basis of setting the corn prices at the farm. Other considerations are grain moisture content and purity although these are not strictly enforced because of inadequate/ unavailable postharvest facilities and the high cost of drying and storage (Rosegrant and Gonzales 1991).

Retail price of corn is over twice as much as the farm gate price. Prices at all levels are usually lowest in July and August and highest during the last quarter of the year. As in rice, the government intervenes in the corn pricing mechanism at the farm level. Through the NFA procurement program, the government buys corn from the farm to raise farm price at least at the support price level.

The intervention has not been quite successful because of budgetary contraints perenially faced by NFA. NFA is usually not able to purchase sufficient volume to have some impact in the market.

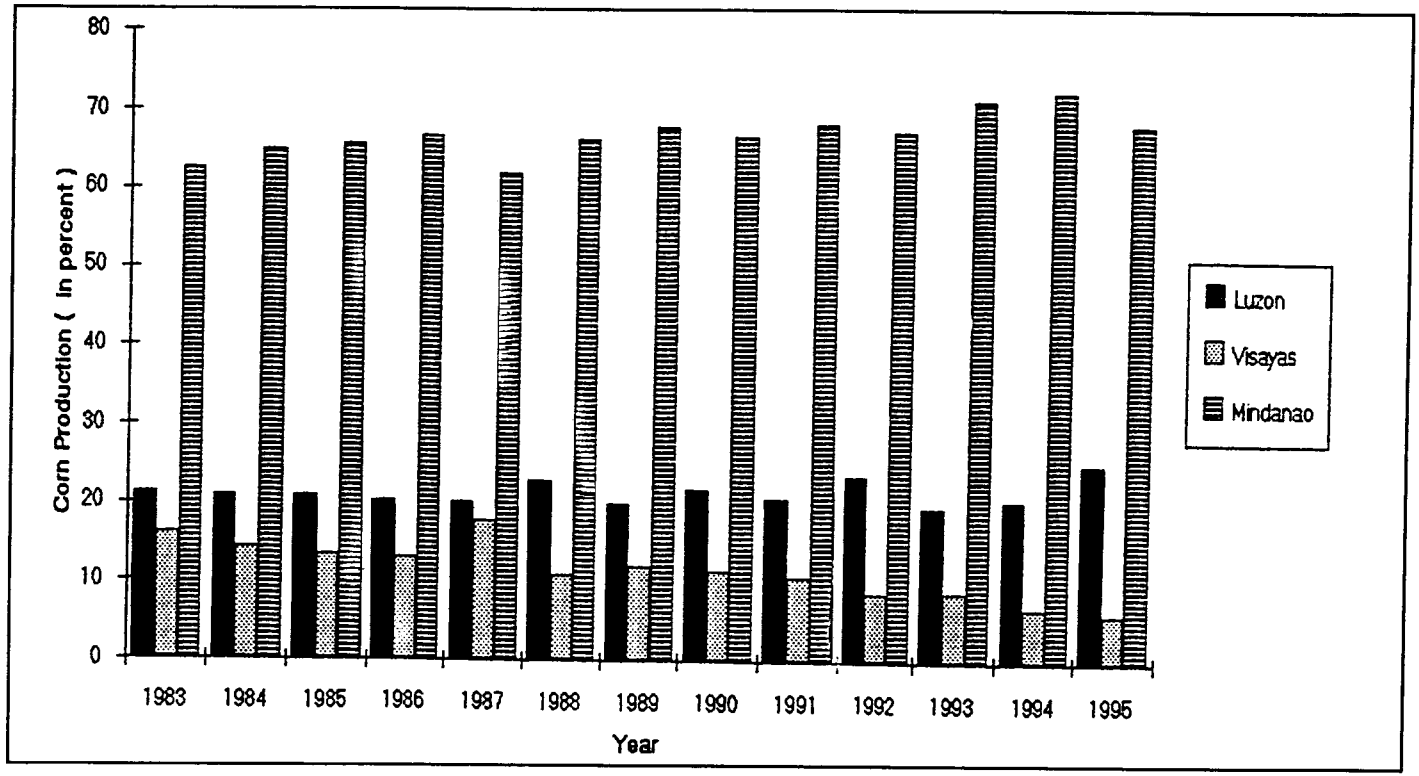

Fig. 2.7. Corn production by island group, 1983-1995. (in '000 mt)

Fig. 2.8. Concentration of corn production and utilization.

Government Intervention in Importation

Prior to liberalization, the government regulates the importation of corn through import licensing which is granted by the Department of Agriculture (DA). An interagency committee formed by DA and NFA decides on the volume of corn to be imported based on assessment of corn needs. Import allocations are then granted the importer based on estimated requirement.

From 1972, the government imposed corn import tariff on the ground of providing protection to producers. The tariff changed frequently which indicated that the government was constantly shifting policies to give protection to either livestock producers, the corn farmers, or the consumers. Pressures from livestock and meat producers resulted in a cut down of tariff rate from 70 percent in 1972 to 20 percent in 1993 as shown below:

	Tariff Rates (%)
1972-80	70
1980-85	50
1988	20
1990	30
1991	20
1992	75
1993	20

Under the Uruguay Round (UR) of the General Agreement for Tariff and Trade (GATT) in agriculture, the country is obliged to lift the nontariff restriction on corn such as import licensing and the eventual reduction of tariff rates. To compensate for the removal of nontariff barriers, the tariff rate on corn is now set at 100 percent and will be reduced over a 10-year period. By the end of the 10th year (i.e., year 2005) this tariff rate should only be 50 percent.

As part of the tariffication agreement, the country will have to allow a minimum access volume of 3 percent of total corn production. The minimum access will be allowed to enter the country at a lower tariff rate of 35 percent. The minimum access volume for 1995 is 130 thousand mt, and is projected to reach 216.9 thousand mt by year 2005.

Issues and Policy Recommendations

Apart from the effect of GATT-UR, the corn industry is faced with varied problems which hinder government efforts to achieve corn self-sufficiency. These include low level of adoption of improved corn

technology, especially the use of hybrid and open-pollinated varieties, declining public investment in corn research and development (R&D), inefficient delivery of extension service, lack of credit support, and inefficient corn marketing and distribution system. The last problem is attributed to poor road network and inefficient shipping industry of the country. For example, it costs only ₱0.16 per kilo to ferry corn from Thailand to Manila. Ferrying corn from South Cotabato to Manila costs ₱0.60.

In a National Consultation Meeting on Corn Production, Utilization and Policies held at PCARRD on October 9-10, 1995, the following recommendations to achieve the goal of self- sufficiency were put forward: (a) strengthen the country's market information system and the participation of PGs in marketing activities; (b) encourage private sector participation in infrastructure development; (c) develop strategies by concerned agencies to make extension workers more effective; (d) encourage cooperative production of open-pollinated seed varieties and develop the capability of farmers' cooperative in seed production; and (e) facilitate accessibility to credit.

Coconut

Coconut is one of the country's traditional export crops that contributes substantially to export revenues. In 1995, it contributed 40 percent to total traditional exports. The country also provides 62 percent of the world exports of copra and coconut oil.

The coconut industry occupies about one-fourth of the total area harvested to agricultural crops. The industry supports directly and indirectly about 18 million Filipinos.

Production

Coconut is widely grown in Mindanao which occupies over half of the total coconut hectarage and produces the largest proportion of output (Figs. 2.9 and 2.10). Other major producing regions are Southern Tagalog, Bicol, and Eastern Visayas.

Through the years, coconut production has been on the downtrend and this could be attributed to the declining hectarage and yield. The ban on copra exportation from 1982 to 1985 may also have affected the industry's production during this period. With the lifting of the export ban in 1986, production during the year surged to a record high of 14.33 million mt.

Between 1986 and 1995, area planted to coconut had been declining at the rate of 0.67 percent per year. The decline in hectarage

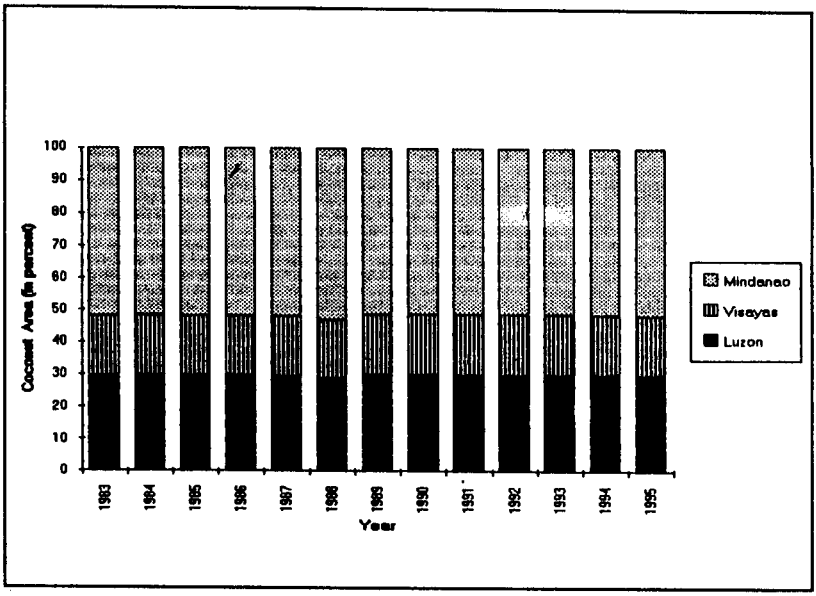

Fig. 2.9. Coconut area by island group, 1983-1995.

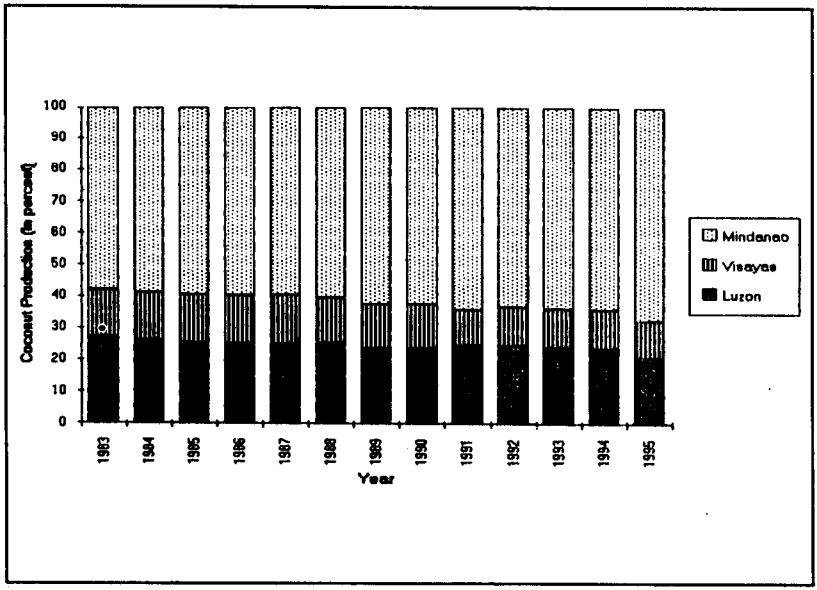

Fig. 2.10. Coconut production by island group, 1983-1995.

had correspondingly depressed production from a high of 14.33 million mt in 1986 to a low of 11.7 million mt in 1995 (Table 2.4). Yield/ha has barely changed (Fig. 2.11).

Table 2.4. Coconut production, area, and yield, 1983-1995.[a]

Year	Production ('000 nuts)	Area ('000 ha)	Yield (nuts/ha)
1983	12368	3201	3864
1984	11738	3223	3642
1985	12828	3270	3923
1986	14335	3284	4365
1987	13730	3252	4222
1988	12482	3259	3830
1989	11810	3110	3797
1990	11940	3112	3837
1991	11291	3093	3651
1992	11405	3077	3707
1993	11328	3075	3684
1994	11207	3062	3660
1995	11701	3080	3779

[a] BAS.

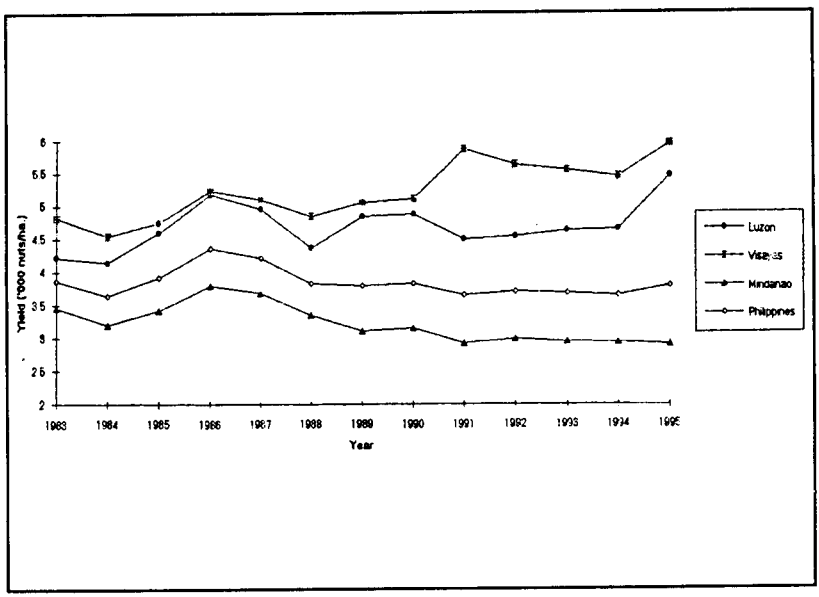

Fig. 2.11. Coconut yield, Philippines, 1983-1995.

Forms of Product Marketed

Copra and coconut oil are the two major products from coconut. Over 80 percent of the total coconut production is processed into copra from which oil and copra meal are extracted. Other exportable products are dessicated coconut and fatty chemicals, and foodnuts. By-products are copra meat, coconut shell charcoal, coconut shell, coconut shell charcoal briquettes, coconut fiber, and coconut trunk.

Market Channels

Copra is the major coconut product sold at the farm level. The domestic market for copra is multilayered with middlemen between the producer and exporter/processor. About 30 percent passes through barrio agents, 12 percent through wholesalers, and 50 percent through assemblers/wholesalers. Of the total copra production, over 90 percent eventually ends up with the exporters who, aside from exporting copra, also provide raw material supply to coconut oil mills. The oil mills then sell coconut oil to domestic and export markets.

Geographic Flow

Copra is generally transported in sacks of 60 kg each. Local dealers transport copra to market centers using either manifested or unmanifested trucks, rail, steamers, or batels (UCAP 1990).

Copra arrival in Manila is less than 10 percent of total coconut production in copra terms. Of the total arrival to Manila in 1990, 70.4 percent came from Luzon, 25.6 percent from the Visayas, and the rest from Mindanao (Table 2.5). Unmanifested truck deliveries from Luzon comprised 42 percent of the total deliveries during the year. These were composed of 5 percent coming from Camarines Sur; 40 percent from Batangas-Laguna-Quezon; and 55 percent from Palawan, Marinduque, Mindoro, and the Visayas.

Coconut Product Export Markets

About 50 percent of total coconut product exports in the past years were in the form of coconut oil, while the rest comprised coconut cake/pellets.

The United States and Europe were the biggest importers of the country's coconut oils absorbing 41 percent and 40 percent, respectively, of the total volume in 1994 (Table 2.6). Japan had a market share of 4 percent, while the remaining were exported to various countries. On

Table 2.5. Copra arrivals in Manila, by island of origin, 1988-1990.[a]

Province/Island	1988	1989	1990
	Sacks of 60 kilos		
Luzon	904,832	1,827,616	1,746,441
Truck Deliveries	465,825	1,332,980	1,044,157
Occ. and Or. Mindoro	1,784	2,103	350
Palawan	294,749	339,516	326,895
Marinduque		400	
Quezon		2,702	
Masbate	98,595	135,496	315,772
Laguna/Batangas			
Romblon	43,903	59,698	200
Rizal		121	59,067
Visayas	466,269	771,878	635,933
Cebu	67,636	194,204	53,338
Leyte	171,744	353,551	147,565
Island of Panay	80,781	104,135	243,463
Samar	133,202	95,782	158,133
Island of Negros	9,996	19,792	28,004
Bohol	2,910	5,014	5,430
Mindanao	200,036	525,743	98,466
			1,232
Davao del Sur and Or.	50,740	106,263	1,232
Misamis Occ. and Or.	19,437	94,048	28,463
Surigao del Sur and Norte	55,230	57,616	29,450
Cotabato	65,540	236,039	39,141
Zamboanga del Sur and Norte	9,089	21,061	
Lanao		10,716	
TOTAL	1,571,187	3,170,237	2,480,840

[a] United Coconut Association of the Philippines (UCAP).

Table 2.6. Volume of coconut product exports by country of destination, 1994.[a]

	Volume (mt)	Percent
Copra		
Korea	15,200	64.10
Europe	1,500	6.30
Bangladesh	7,000	29.85
Total	23,700	100.00
Coconut Oil		
Europe	342,393	39.30
USA	357,219	41.00

Table 2.6. (Continued).

	Volume (mt)	Percent
Malaysia	46,660	5.40
Indonesia	24,465	2.80
Japan	39,209	4.50
PROC	11,480	1.30
Others	49,493	5.70
Total	870,919	100.00
Copra Meal		
Europe	562,028	95.90
Korea	14,000	2.40
Malaysia	700	0.10
Japan	4,428	0.80
Others	5,017	0.90
Total	586,173	100.00
Dessicated Coconut		
USA	35,941	47.30
Europe	16,986	22.40
Asia and Pacific	10,952	14.40
Canada	4,173	5.50
Middle East	1,431	1.90
Latin and Central America	6,132	8.10
Others	318	0.40
Total	75,933	100.00
Coco Shell Charcoal		
Japan	26,656	65.80
Europe	6,720	16.60
Others	7,117	17.60
Total	40,493	100.00

[a] UCAP.

the other hand, the bulk of copra exports went to Korea (64%). Copra meal was largely exported to Europe (96%) and dessicated coconut to the United States (47%) and Europe (22%).

Prices

Domestic prices of coconut products are influenced by the trends in the export prices of coconut products (Figs. 2.12 and 2.13). Thus, the drastic decline in export prices of coconut products resulted in the decline in domestic coconut prices.

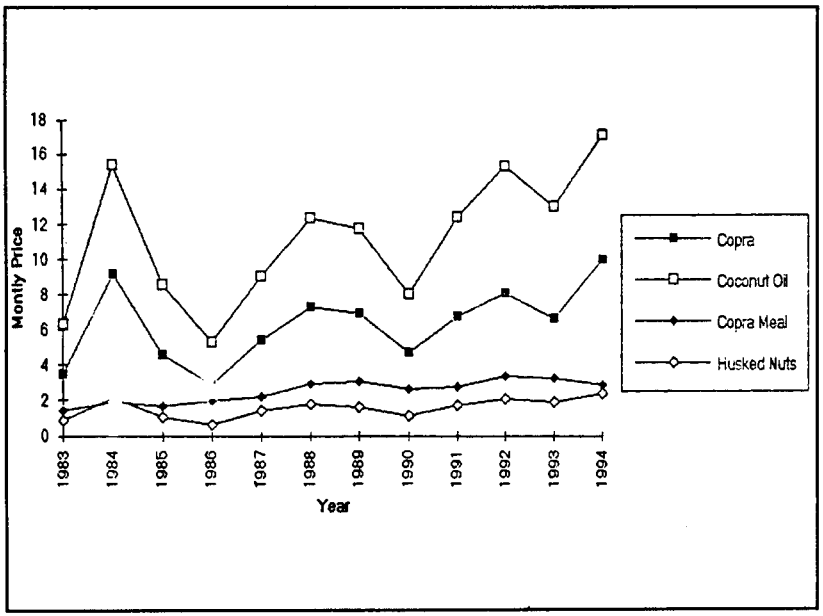

Fig. 2.12. Domestic prices of coconut production, Philippines, 1983-1994. (P/kg)

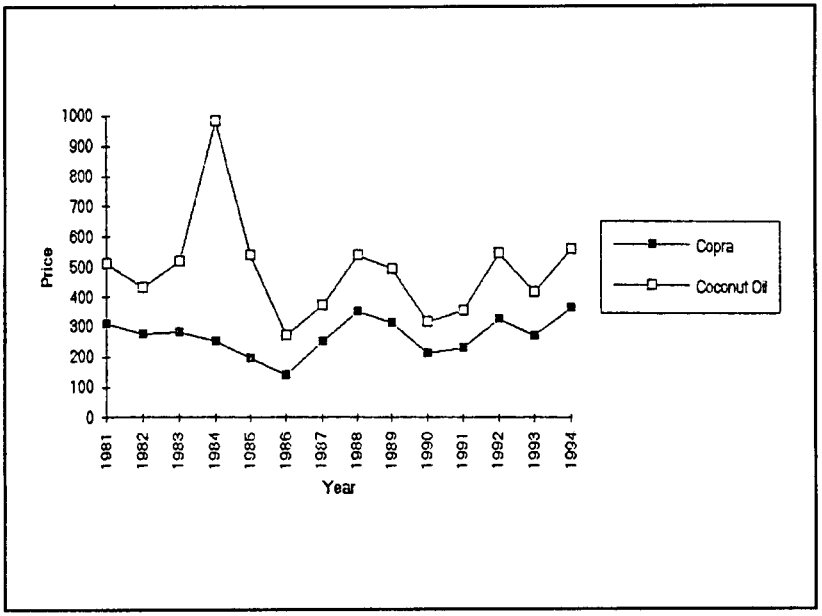

Fig. 2.13. Export prices of copra and coconut oil, Philippines, 1981-1994.

Prior to trade liberalization prices received by the farmers for copra were the market prices at the farm less the coconut levy. Until 1985, the coconut producer paid a levy rate of 32/100 kg of copra (resecada) and 72.20/mt of husked nuts purchased and/or delivered to copra exporters, oil millers, and other users of copra (Aquino 1993). Aside from coconut levy, such government policies as export tax, coconut export quotas, and the monopoly created by United Coconut Oil Mills exerted considerable influence on the farm prices of copra and coconut products.

Issues, Constraints, and Policy Recommendations

Through the years, the major problems of the coconut industry relate to low income of farmers brought about by low price of coconut product. Lately, the down trend in production and hectarage emerged as a crucial problem. Massive cutting of coconut trees for lumber, cadang-cadang disease, and old trees whose productivity has been declining contribute to the problem.

Moreover, the traditional method of drying still being widely practiced by the farmers results in low-quality copra. The aflatoxin problem and the protectionist stance of Philippine trading partners are persistent issues which are highly related to coconut processing and the processing methods adopted by the farmers.

The growing preference for palm oil and other substitutes plus the increasing competitiveness of other coconut producing countries further complicates Philippine problems at the export market. It is, thus, imperative for the national government to give priority to improving farm yields and productivity; develop new products from coconut; and improve the quality of coconut products.

Among the policy reforms that must be pursued are the following:

1. The Philippine Coconut Authority (PCA) should enforce the pricing with respect to quality of copra.
2. Cooperatives should diversify in their production to get the full benefits from the other coconut products and by-products. They should be assisted in funding markets for their products and be provided with appropriate support services.
3. In relation to (2), market linkage assistance should be provided to cooperatives.
4. Greater support for coconut research, especially for product quality improvement, should be provided.

Root Crops

Two of the most widely cultivated root crops in the country are cassava and sweetpotato.

Production, Area, and Yield

Cassava production from 1981 to 1995 has its highs and lows, but is generally increasing at the average rate of 1.73 percent per year (Fig. 2.14). During the period, production peaked at almost 2 million mt in 1995 and hit the lowest point in 1983 with 1.15 million mt.

Cassava is widely grown in the Autonomous Region for Muslim Mindanao (ARMM) which supplies 40 percent of the total production in the country. This is also where 32 percent of the cassava area is located. The crop is also widely grown in Bicol, Central Visayas, Eastern Visayas and in Southern and Northern Mindanao.

Through the years, cassava hectarage fluctuated. No significant increases were noted between 1981 and 1995. Yield stood at less than 9 mt/ha, except in 1995 when it increased to 9.03 mt/ha.

Sweetpotato production performed dismally during the period which may be accounted for by the decline in area devoted to the crop. From 924,593 mt in 1981, production dropped to 690,574 mt in 1995. This was accompanied by the decline in hectarage from 178,896 ha in 1981 to 147,412 ha in 1995. Yield remained at less than 5 mt/ha on the average.

Sweetpotato is commonly grown in Bicol, as well as in Eastern Visayas, CARAGA, and in the Cordillera Administrative Region (CAR).

Utilization and Consumption

Both cassava and sweetpotato are utilized as food, feed, and raw materials of agroprocessing industries. Of the total available supply of cassava in 1995, 84 percent were processed for food and 6 percent for feed. A small proportion was exported (Table 2.7).

Researches showed that both crops have high nutritive value and have proven as an effective feed supplement, especially for swine and cattle (The Green Pages 1995). Sweetpotato can be a substitute for up to 50 percent of the corn requirement in livestock feed rations. Cassava can be processed as meal and used as substitute for feedgrains and supplemental poultry feed, especially in times of corn shortages.

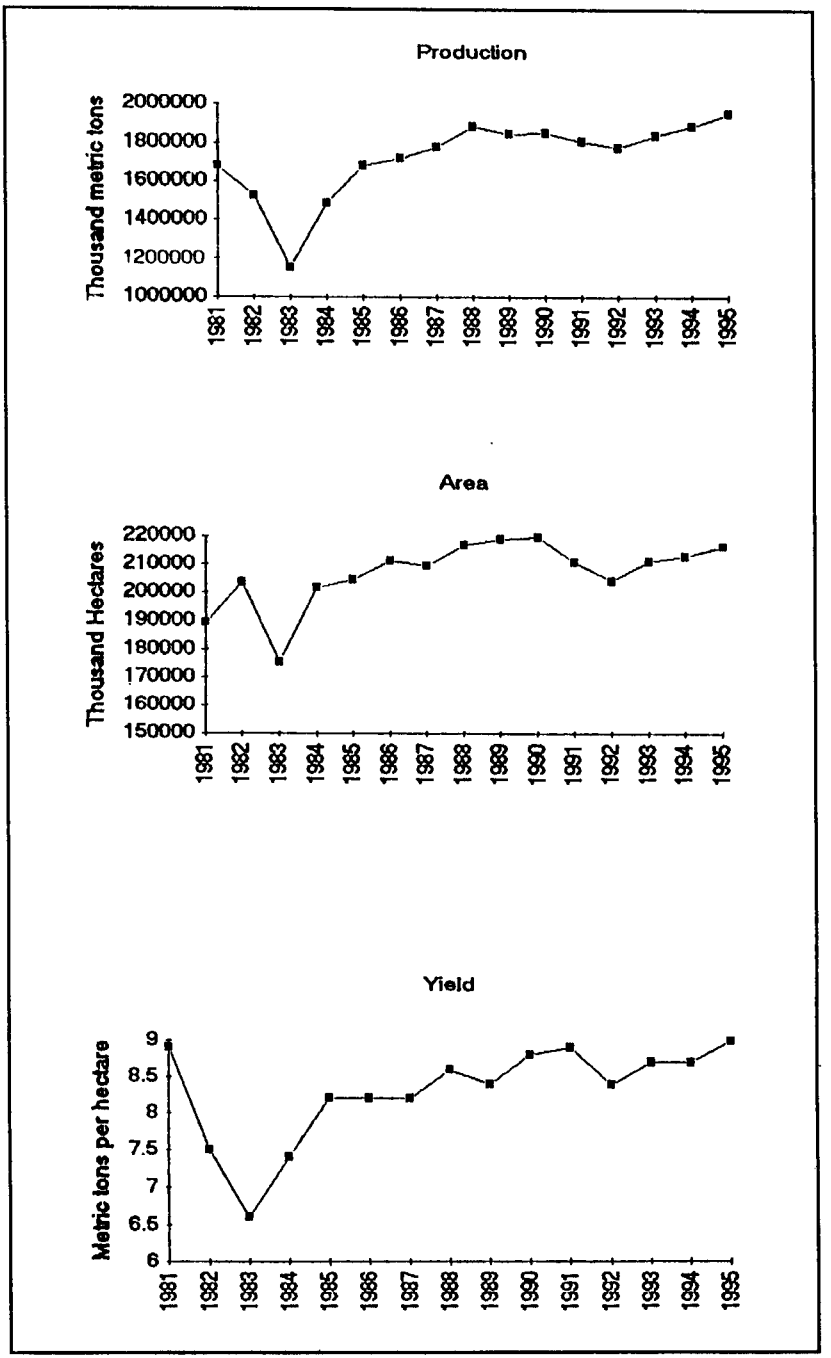

Fig. 2.14. Cassava production, area, and yield, 1985-1995.

Table 2.7. Supply and utilization of cassava and sweetpotato, 1994 and 1995.[a]

Item	Cassava		Sweetpotato	
	1994	1995	1994	1995
Supply				
Production Imports	1,891.78	1,906.83	695.61	698.93
Gross Supply	1,891.78	1,906.83	695.61	698.93
Utilization				
Exports	0.45	0.23		
Planting Materials			2.91	2.93
Feeds and Wastes	113.51	114.41	34.78	34.95
Processing	1,588.72	1,601.54		
Net Food Disposable				
Total	189.11	190.65	657.92	661.06
Per Capita				
Kg/yr	2.76	2.71	9.59	9.41

[a] NSCB.

Distribution Channels

Distribution channels for both crops are not as complex as in other commodities. A study conducted in Eastern Visayas showed that the bulk of cassava produced in the region (79%) ended up directly to the final consumers (Manuel 1978). The rest went to retailers and wholesaler-retailers.

Likewise, the bulk of sweetpotato (66%) went to the final consumers (Colis 1977). The rest were sold to retailers (23%), wholesalers (9%), and processors (2%).

In Mindanao, contract growing of cassava is now becoming a common arrangement among farmers and cooperatives with big processors such as San Miguel Corporation. This assures the farmers a ready market for their produce.

The country has also been exporting cassava with the United States and Canada as major buyers. Cassava exports reached a record high of 33,734 mt in 1991, but the volume exported drastically declined in the succeeding years (Table 2.8).

Prices

Average farm, wholesale, and retail prices of cassava and sweetpotato followed more or less uniform patterns and were generally increasing

Table 2.8. Cassava exports, fresh or dried.[a]

Year	Volume (mt)	Value (US$000 FOB)
1986	10,619	1,152
1987	10,649	1,226
1988	20,997	2,562
1989	21,405	2,437
1990	8,356	1,387
1991	33,734	4,338
1992	427	560
1993	418	566
1994	450	338
1995	230	173

[a] NSO, Foreign Trade Statistics.

through the years. The highest yearly average was observed in 1995 (Figs. 2.15 and 2.16).

At the farm level, mostly prices of cassava were highest during the last quarter of each year. However, no definite pattern can be observed for both wholesale and retail prices on a monthly level.

Monthly sweetpotato prices showed more defined trends both at the farm, wholesale, and retail levels. Prices were usually highest during the third quarter of the year (Fig. 2.16).

Problems and Issues

Both root crops are considered by farmers as secondary or subsistence crops and are usually grown under coconut utilizing minimal inputs such as fertilizer. With much practice, it is not surprising that farmers obtain very low yields. In commercial farms such as those found in Mindanao, yield levels can reach as high as 20 mt/ha. A yield level of 40 mt/ha is even attainable under ideal conditions.

Farmers are also beset with the low value of both crops. During harvest, prices of cassava and sweetpotato are relatively low in contrast with other annual crops such as corn and palay. Lack of sustained supply to meet the demands of processors is also a problem, the reason feed millers do not use root crops as raw materials for feed and flour.

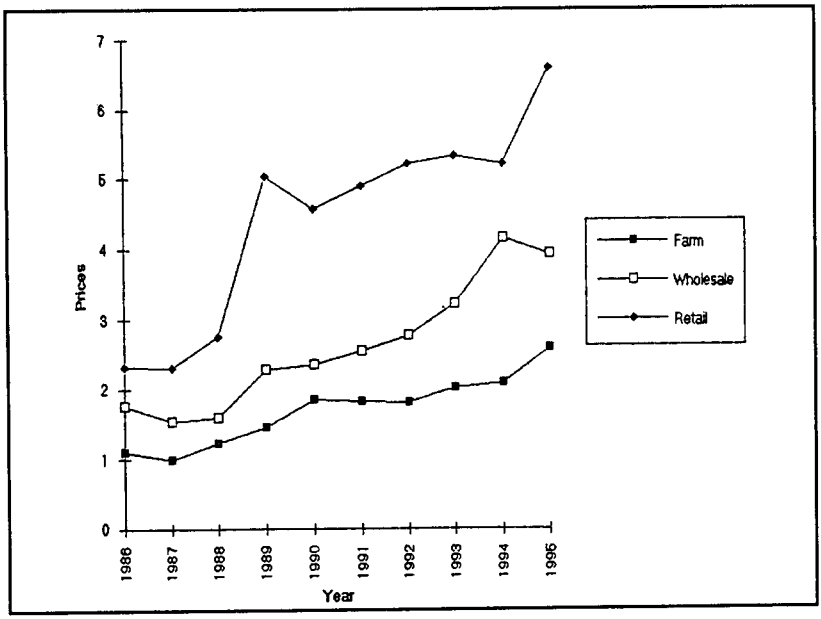

Fig. 2.15. Farm, wholesale, and retail prices of cassava, Philippines, 1986-1995. (P/kg)

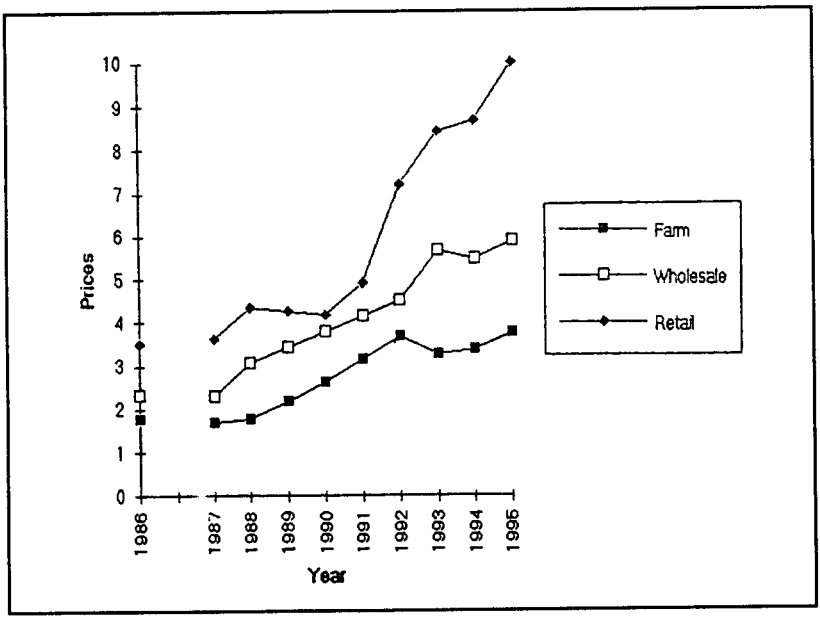

Fig. 2.16. Farm, wholesale, and retail prices of sweetpotato, Philippines, 1986-1995. (P/kg)

Onion

Production, Area, and Yield

Onion is a dry season crop usually planted as a second crop to rice. It is usually planted in Nueva Ecija in Central Luzon and in Ilocos region, with the former sharing 60 percent of the total onion production and the latter, 36 percent (Table 2.9).

ROI in onion is high, which makes it one of the more profitable crops in the country. ROI for native onion is 2.47; for red creole, 2.06 and for yellow granex, 2.04 (Batang et al. 1986 as cited by Librero and Rola 1996).

Onion production through the years, however, is marked by fluctuations because of changes in weather conditions, pest and diseases, area harvested, and yield (Fig. 2.17). The occurrence of long dry season enhances the incidence of pests and diseases that significantly affect onion yield.

Marketing Aspects

The marketing system of onion is basically competitive because of the presence of many buyers and sellers interacting in the market.

Table 2.9. Onion production, area, and yield by region, 1994-95.[a]

Region	Production		Area		Yield	
	1994	1995	1994	1995	1994	1995
	kg		ha		kg/ha	
Ilocos	24,956	27,215	2,930	3,180	8.5	8.6
Cagayan Valley	464	810	196	127	2.4	6.4
Central Luzon	47,575	56,121	3,302	5,077	14.4	11.1
Southern Tagalog	219	198	94	85	2.3	2.3
Bicol	33	33	10	10	3.3	3.3
Western Visayas	56	69	23	22	2.4	3.1
Central Visayas	108	102	50	31	2.2	3.3
Eastern Visayas						
Western Mindanao	60	60	20	15	3.0	4.0
Northern Mindanao	51	50	10	9	5.1	5.6
Southern Mindanao	103	66	40	21	2.6	3.1
Central Mindanao	24	22	10	4	2.4	5.5
Total	73,649	84,746	6,685	8,581	11.0	9.9

[a] BAS.

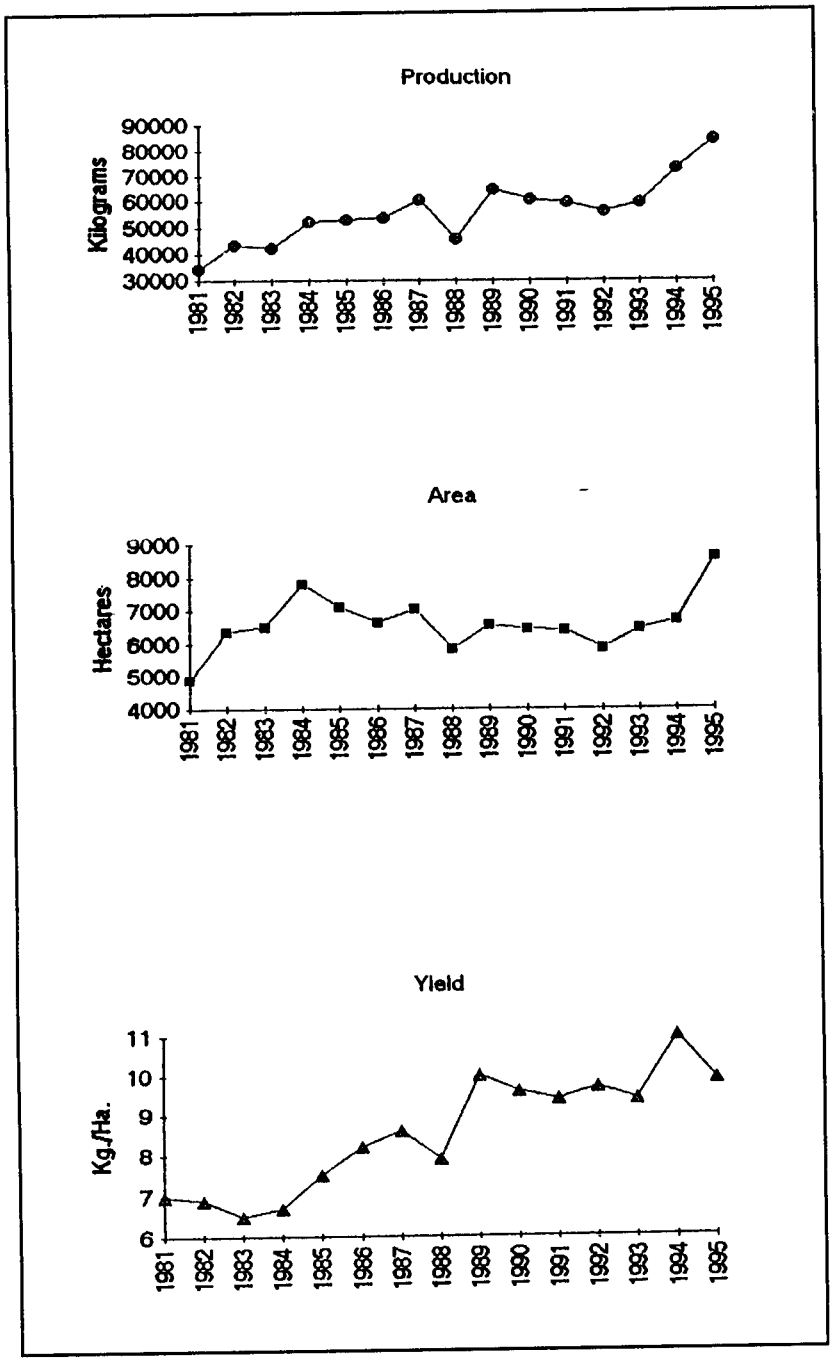

Fig. 2.17. Onion production, area, and yield, 1981-1995.

Farmers sell onions based on variety and size, with no strict standards being followed by both farmers and traders.

The abundance of intermediaries in onion marketing has led to increased marketing cost (ERS 1978 as cited by Librero and Rola 1996). The highest marketing costs were incurred by wholesaler/retailer as observed by Cabral (1993) in Nueva Ecija.

Average prices at the wholesale and retail levels showed high variation which can affect production of the crop and may cause onion growers to shift to other cash crops when the price of onion in the market is low (Table 2.10).

At the buyers' side, the market structure approximates an oligopsony. There are few big Filipino and Chinese middlemen based in Metro Manila who hire commission agents to assemble enough volume of storage in big cold storage facilities in Metro Manila and nearby provinces. The commission agents usually hire subagents in a particular production area and pay them on commission basis too. Aside from big businessmen, there are wholesalers, wholesaler-retailers, and retailers involved in the marketing chain.

From the major outlet, that is Metro Manila, onions are transported to Southern Tagalog, Bicol, the Visayas, and Mindanao.

Farmers in Central Luzon are often tied with the credit marketing arrangements with Manila-based traders who provide seeds, inputs, and capital to producers to capture the bulk of the produce at harvest time. To improve their bargaining position, farmers in the region had formed cooperative associations to enable them to gain access to credit from LBP. A farmer who is not a member of a cooperative sells his produce

Table 2.10. Farm, wholesale, and retail prices of onion, 1986-1995.[a]

Year	Native			Red Onion		
	Farm	Wholesale	Retail	Farm	Wholesale	Retail
1986	5.37	7.86	11.6	[b]	11.04	12.94
1987	5.56	7.57	13.14	[b]	9.83	12.963
1988	5.7	15.38	21.19	11.41	24	30.25
1989	[b]	12.26	17.99	7.66	14.22	21.26
1990	[b]	13.87	16.49	7.03	14.02	17.88
1991	12.27	20.97	25.08	11.3	22.37	28.07
1992	11.75	16.89	23.27	9.56	19.75	26.28
1993	12.67	17.46	23.88	11.3	19.47	25.85
1994	13.91	18.34	29.35	16.01	27.98	36.81
1995	15.68	16.55	[b]	9.13	17.9	26.21

[a] BAS.

[b] No data available.

either to the wholesaler-assembler, wholesaler, wholesaler-retailer, or retailer. In Nueva Ecija, the primary outlet of a farmer-member is his cooperative and from the cooperatives, onions from the province are stored either at the Food Terminal Inc. (FTI) in Metro Manila or in private facilities in Central Luzon. After some time, these are sold to retailers in Divisoria and other buyers from various places.

Market Potential

Onion has a good prospect as a dry season crop under irrigated conditions. The average yield of 7.7 mt is way below the potential yield of 25-30 mt. This means that it is still possible to improve the yield.

The export potential of onion has not been fully tapped. Only 8 to 17 percent of the total production were exported between 1985 and 1995. The country's fresh onion exports in 1993 went to Singapore, Japan, and Hongkong. All dried onion exports during the year went to Switzerland.

Issues and Concerns

There is virtual lack of technology on the production of quality onions, particularly the yellow granex variety. Seeds are still being imported. Development activities on varietal improvement to lengthen shelf life, higher solid components for processing, and alternative storage methods should be pursued.

People venturing into onion growing should be cautious as the industry is sensitive to oversupply. Adequate storage facilities are needed to prolong shelf life and avoid price drops during the harvest season.

Banana

Banana is one of the most important fruit crops in the Philippines. Fresh banana is the country's top fruit export.

Banana production is undertaken in only about 2.3 percent of the total area harvested to agricultural crops, despite its economic importance as a major foreign exchange earner. Banana production in the country ranged from 2.9 million to 3.2 million mt between 1985 and 1994 (Table 2.11).

Banana is produced both in commercial and small-scale. Commercial farms are concentrated in Mindanao, particularly in Northern, Southern, and Central Mindanao, which altogether occupy

Table 2.11. Banana production and hectarage.[a]

Item	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Production ('000 mt)	3127	3193	3067	3190	3190	2913	2951	3059	3069	3112
Hectarage ('000 ha)	290	293	299	295	296	300	311	321	326	324

[a] BAS.

about 40 percent of the total area planted to the crop (Figs. 2.18 and 2.19). Small farms, on the other hand, are concentrated in Cagayan Valley, Southern Tagalog, and Western and Eastern Visayas.

Commercial farms are oligopolistically controlled by three transnational companies: Del Monte, Philippines Standard Fruits Corporation (through Dole Philippines), United Brands (Tagum Agricultural Development Corporation), and Sumitono-Dahitri Companies (under JVA Management Corporation).

Banana production of Mindanao comprised over 70 percent of the total production. Major varieties produced in these areas are cavendish and señorita which are intended for export. Yield/ha in Mindanao is remarkably higher than that in Luzon and the Visayas (Fig. 2.20).

Commercial banana operations in Mindanao are implemented through a combination of contracts with corporate growers, a leased farm, and small contract agreements. These operations are being done by Standard Fruits Corporation. The Tagum Development Corporation, however, leases some 4,000 ha from the Davao Penal Colony for its plantation operation.

Cagayan Valley, Southern Luzon, and the Visayas regions grow such varieties as lacatan, saba, and bungulan intended mostly for local

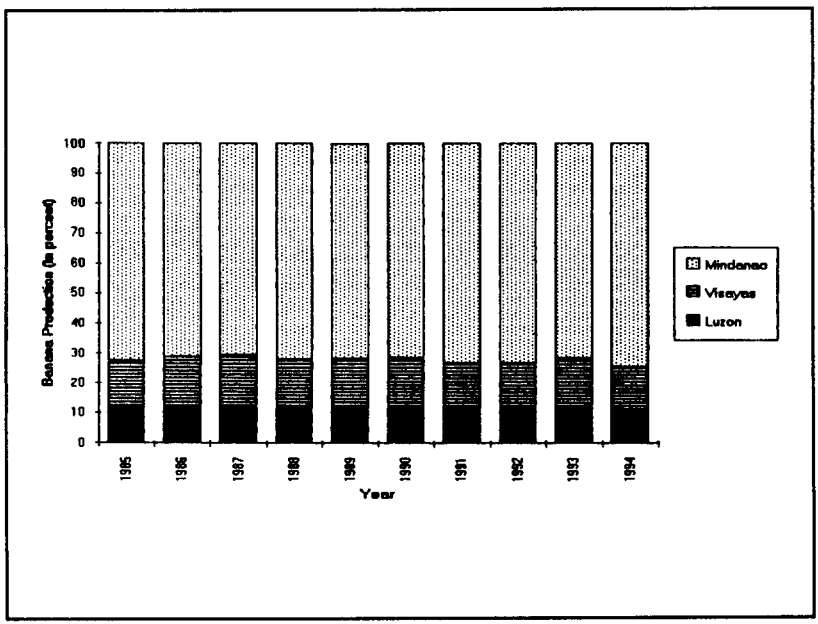

Fig. 2.18. Banana production by island group, 1985-1994.

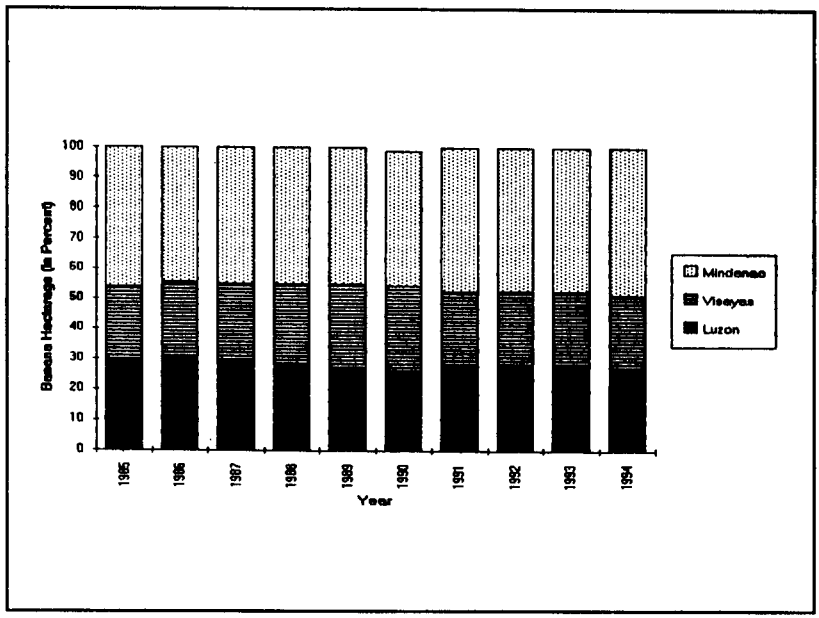

Fig. 2.19. Banana hectarage by island group, 1985-1994.

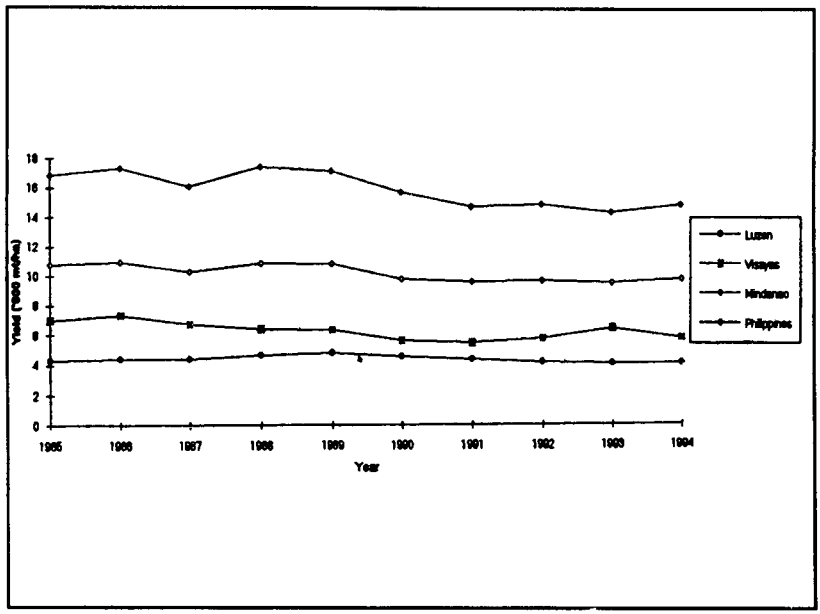

Fig. 2.20. Yield of banana, Philippines, 1985-1994.

consumption. The saba variety is now being processed on a limited basis as chips for export.

Utilization

About one-fourth of the total banana produce is exported either as fresh, dried, and chips as crackers. For domestic use, the remaining portion is utilized either as fresh fruit, crackers, chips, powder, or puree. In 1993, exports of fresh banana reached a record high of 1.15 million mt, an increase of 40 percent over the previous year (Table 2.12). Similarly, export volume of banana crackers went up by 22 percent in 1993 from the previous year's 12,231 mt.

Table 2.12. Banana exports (volume in metric tons, value in thousand US $).[a]

Year	Fresh		Dried		Chips/Crackers	
	Volume	Value	Volume	Value	Volume	Value
1986	856743	130222	306	286	11354	9635
1987	774983	121243	333	294	10381	9129
1988	866793	146013	259	261	15136	15739
1989	851047	146189	179	163	12966	12708
1990	839779	149279	59	70	10219	10483
1991	955414	172998	53	58	13649	15486
1992	821737	157734	43	42	12231	13820
1993	1153466	226072			14923	14639

[a] NSO, Foreign Trade Statistics.

Marketing System

The domestic market for banana may be as simple as to involve only one trader (the retailer), or as complex as to include many intermediaries. These are the assemblers, wholesalers, and viajeros. They generally dictate the farm gate price since they also shoulder the cost of assembling and transporting the commodity to the consumers.

Over 60 percent of the country's fresh banana exports is absorbed by Japan. United Arab Emirates takes about 14%; Hongkong, 4%; Korea, 9%; and Saudi Arabia, 9% (Table 2.13).

Fresh bananas for export are graded, labelled, wrapped, and loaded in a refrigerated boat within one day. Fresh banana exports may be threatened by increasing competition from other countries such as Indonesia which is developing its banana industry by allowing foreign investments from transnationals like Dole.

Table 2.13. Banana export by country of destination, 1993.[a]

Country	Volume (mt)	Percent	Value ('000 US $)
Japan	745337	66	148924
United Arab Emirates	155119	14	29766
Rep. of KOrea	105068	9	19715
Saudi Arabia	80913	7	15574
Hongkong	40025	4	6962
All	1126462	100	220941

[a] NSO, Foreign Trade Statistics.

The perishable nature of banana is a limiting factor in the farmer's bid to command a favorable price for his produce. Thus, producers, especially those engaged in small-scale operation, have to contend with whatever price the buyers offer them. Statistics also indicate a large margin between the farm gate and wholesale prices and that between wholesale and retail prices which indicate some form of inefficiencies in the marketing system (Fig. 2.21).

Since most banana production areas are situated in places accessible only by trails or paths, transport is difficult and time consuming. Buyers, therefore, have to bear the high transportation cost. Other important marketing issues are the condition of farm-to-market roads, transportation and port facilities, postharvest and storage facilities.

Prospects

Data from the Food and Agriculture Organization (FAO) show that the Philippines was the world's fourth leading banana producer in 1993, with a 9.7 percent share of an estimated world production of 31.9 million mt (Table 2.14). Banana exporting business has lately become extremely competitive. The Philippine banana which used to dominate the Japanese market, is now under threat from Latin America and other Asian countries (e.g., Indonesia). The industry is also beset with the high production cost, including high labor cost.

Mango

Mango is the Philippines' third largest fruit export, next to banana and pineapple. In 1995, the country's production stood at 432.32 thousand mt covering an area of 68.06 thousand ha. Western Visayas,

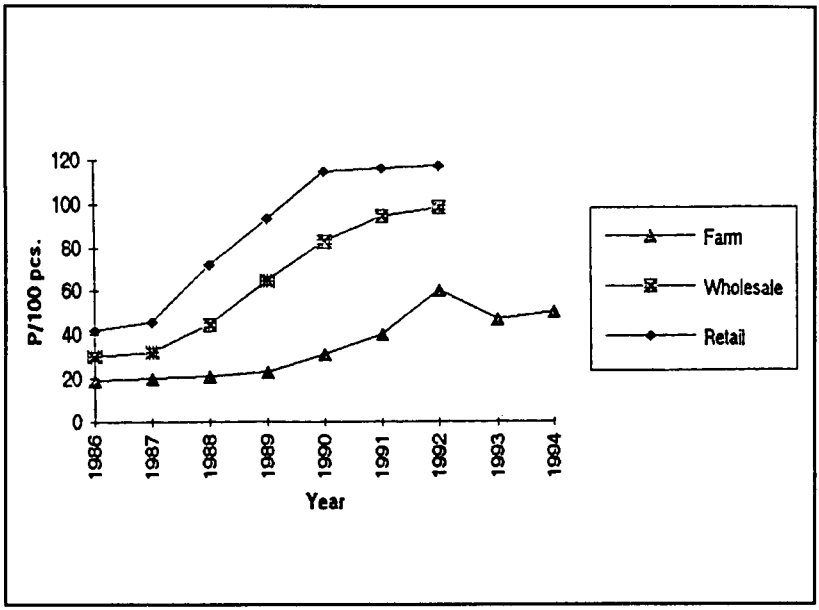

Fig. 2.21. Prices of lakatan banana, Philippines, 1986-1994.

Table 2.14. World production of banana, 1993.[a]

Country	Production ('000 mt)	Percent
India	7200	22.6
Brazil	5593	17.5
Ecuador	3990	12.5
Philippines	3100	9.7
Indonesia	2550	8.0
China	2399	7.5
Columbia	1950	6.1
Costa Rica	1827	5.7
Mexico	1650	5.2
Thailand	1650	5.2
Total	31909	100.0

[a] FAO Production Yearbook.

Central Luzon, and Ilocos lead the country's mango production regions accounting for more than 60 percent of the national production volume (Table 2.15). Similarly, these three regions account for the largest areas planted to mango. On a yearly basis, mango production is characterized by fluctuations as shown in Figure 2.22.

Mango is sold fresh or processed, and when processed may take on several forms such as mango in syrup, pickled, or dried/dehydrated.

Channels for mangoes may be as short as that of farmer-retailer-consumer. Even the flow of fruits to the export market follows a relatively simple pattern and quality standards are rigidly enforced. However, duplication of marketing channels and consequently, of functions, occurs resulting in high prices. In addition, lower-quality mangoes result from repeated handling and greater time involved before the commodity reaches the final consumer.

Mango Export Market

In 1995, fresh mango exports stood at 43,937 mt and dried mangoes at 620 mt. This was an increase from the 1994 exportation of 29,065 mt of fresh mangoes and a decline from 624 mt of dried

Table 2.15. Mango production, area, and yields by region, 1995.

Region	Volume	Percent	Area	Percent	Yield
	(mt)		(ha)		(mt/ha)
CAR	1,402	0.3	392	0.6	3.6
Ilocos Region	73,307	17.0	12,829	18.8	5.7
Cagayan Valley	6882	1.6	3148	4.6	2.2
Central Luzon	125,768	29.1	20,183	29.7	6.2
Southern Tagalog	31,156	7.2	7,071	10.4	4.4
Bicol	416	0.1	254	0.4	1.6
Western Visayas	93,902	21.7	9,683	14.2	9.7
Central Visayas	34,964	8.1	5,122	7.5	6.8
Eastern Visayas	318	0.1	89	0.1	3.6
Western Visayas	15,973	3.7	1,764	2.6	9.1
Northern Mindanao	10,998	2.5	1,799	2.6	6.1
Southern Mindanao	21,356	4.9	3,487	5.1	6.1
Central Mindanao	4075	0.9	425	0.6	9.6
ARMM	11,805	2.7	1,814	2.7	6.5
Total	432,322	100.0	68,060	100.0	6.4

[a] BAS.

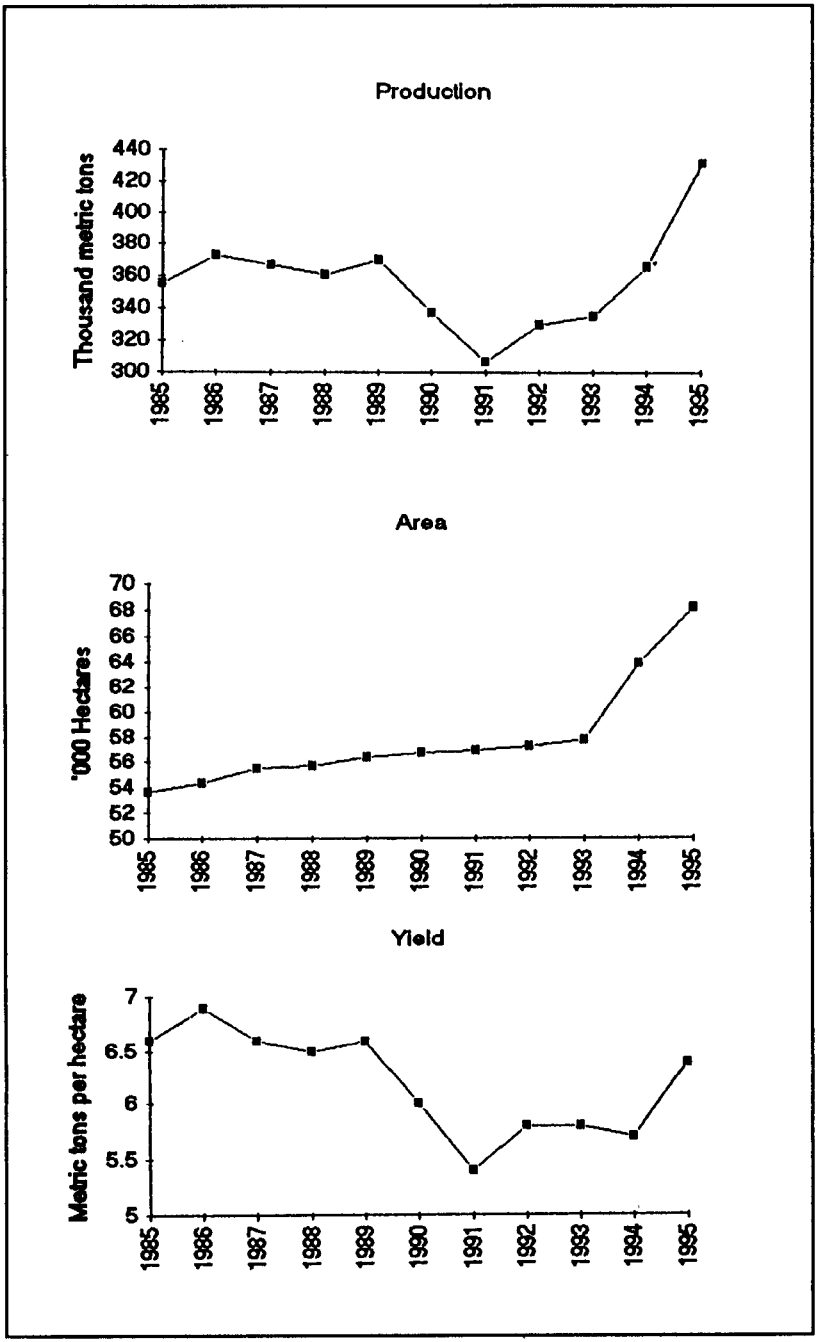

Fig. 2.22. Mango production, area, and yield, 1985-1994.

or dehydrated mangoes. Taken together with the 4,598 mt of mango puree, 1,476 mt of juice, and 269 frozen mango, mango exportations totaled more than 51,065 mt worth over US$54.12 million FOB. Major export markets for fresh mangoes are Hongkong, Japan, and Singapore. Hongkong remains the major destination of fresh mangoes. From the 1970s to the early 1980s, more than half of the total mango exportation of the country went to Hongkong. In 1986, however, it declined to 37 percent of the total volume. In the same year, Japan lifted its ban on Philippine mangoes and absorbed 47 percent of the total volume of fresh mango exportation. Exports to Japan had since then increased with a growth rate of 25 percent yearly until 1988. The Philippine Mango Exporters' Foundation reported that from 1988 to 1992, volume of mango export to Japan is increasing, but the price is continuously decreasing.

Major destinations of dried mangoes include the United States, Singapore, and Canada. Dried mangoes are already exported to more than 20 countries.

Consistent export markets for mango in syrup include the US, Australia, and Canada.

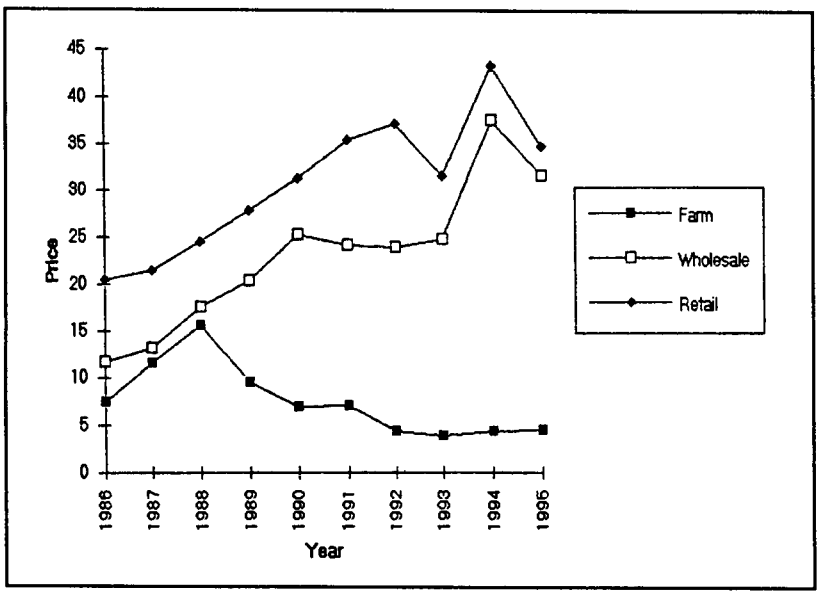

Fig. 2.23. Prices of mango, Philippines, 1986-1995.

Domestic Prices

Huge markups characterize mango farm to retail prices. This is evident from the large differences between farm and retail prices where the latter is more than double the former (Fig. 2.23).

Export Prices

From 1975 to 1986, prices of mango had been increasing at a rate of 27 percent per year. Increases were then attributed to increased demand for mangoes in major outlets, particularly Australia, Japan, and Singapore. Mangoes bound for Hongkong were generally lowest in prices because of its proximity to the country.

Falling prices hound exporters of mango to Japan where in 1990, price of mango was US$27 per carton. Price, however, was down to US$9.50 per carton in 1992. Furthermore, the Japanese government requires exporting firms to subject mangoes to vapor heat treatment.

Livestock and Poultry

Livestock and poultry, a major subsector of agriculture, contribute about 21 percent of the GVA in agriculture. They are raised either on a backyard or commercial-scale.

Commercial producers dominate the poultry industry, while cattle is predominantly raised in backyard farms. The implementation of the Comprehensive Agrarian Reform Program (CARP), revocation of pasture leases, and peace and order problems in the countryside have discouraged the ranch-type of cattle raising commonly practiced in the 1970s. About 90 percent of the cattle population are now found in backyard farms. Despite this, however, cattle inventory between 1986 and 1995 exhibited an annual growth rate of 1.4 percent.

Hog inventory, on the other hand, has, for the past 10 years, exhibited an annual growth rate of 2.5 percent, from 7.27 million head in 1986 to 8.94 million in 1995 (Table 2.16). About 83 percent of the hog population are produced in the backyard, while the rest are raised in commercial farms which are mostly found in Central Luzon, Southern Tagalog, and Southern Mindanao.

The rapid development of the chicken industry during the last three decades has been brought about by the proliferation of small- and medium-scale raisers and the emergence of large integrators which now produce over 85 percent of poultry supply in the country. These integrators are mostly located in Central Luzon and Southern Tagalog.

Table 2.16. Cattle and hog inventory by type of farm, in thousand head.[a]

Year	Cattle			Hogs		
	Backyard	Commercial	Total	Backyard	Commercial	Total
1986	1505	310	1815	6081	1193	7274
1987	1496	250	1746	5920	1117	7037
1988	1489	211	1700	6312	1269	7581
1989	1503	179	1682	6677	1231	7908
1990	1438	191	1629	6776	1214	7990
1991	1485	191	1676	6621	1458	8079
1992	1577	153	1730	6717	1305	8022
1993	1754	160	1914	6663	1290	7953
1994	1753	169	1922	6766	1460	8226
1995	1835	186	2021	7181	1760	8941

[a] BAS.

They maintain hatcheries and farms that assure steady supply of quality chicken and feeds. They also operate modern processing plants and supply the needs of Central Luzon, Southern Tagalog, and Metro Manila population. As of 1995, there is a chicken inventory of 96 million birds, an increase of 17 percent from 1990 (Table 2.17).

Backyard poultry and livestock production is generally dependent on the scavenger type of feeding or use of household surpluses. Cattle in backyard farms subsist on available feed resources such as napier grass and corn stover.

Meat Supply

Livestock and poultry meat supply for domestic consumption comes from local inventories and imports. For beef, both local production and importation have been increasing through the years as shown in Table 2.18. From 2.52 thousand mt in 1986, beef imports rose to 42.9 thousand mt in 1995. The bulk of imports, however, went to manufacturers and first-class restaurants which required quality beef. Beef for manufacturing comes from Europe, while prime beef is imported from Australia and the United States.

Dressed chicken production, likewise, substantially increased through the years, but importation was fluctuating with the highest volume recorded in 1994 at 200 mt.

Pork production posted a 90 percent increase in 1995 over the 1986 production level. Import volumes were characterized by fluctuations

Table 2.17. Chicken inventory by type, in thousand head.

Year	Broiler	Layer	Native	Total
1990	26565	9814	45924	82303
1991	24529	8330	45381	78240
1992	27356	7407	46763	81526
1993	31173	8606	47383	87158
1994	34771	8342	49996	93109
1995	27885	9365	58966	96216

Table 2.18. Beef and pork production and importation.[a] (in '000 mt)

Year	Beef		Pork		Chicken	
	Production	Imports	Production	Imports	Production	Imports
1986	85	2.52	501.91	0.4	256.12	0.003
1987	91	4.35	537.87	1.15	311.16	0.027
1988	92	5.05	600.6	2.46	350.35	0.004
1989	96	9.49	673.4	3.42	384.23	0.087
1990	103	10.88	750.37	1.18	331.18	0.185
1991	112.41	10.23	769.13	0.46	291.68	0.034
1992	115.6	14.37	816.82	0.42	335.88	0.041
1993	125.85	17.2	851.2	0.39	345.68	0.112
1994	135.51	36.14	921.76	0.69	339.2	0.2
1995	147.46	42.88	969.86	2.18	328.98	0.19

[a] NSCB.

with the highest levels noted in 1989 (3,420 mt), 1988 (2,462 mt), and 1995 (2,183 mt).

Marketing

Marketing of livestock and poultry in the country is almost totally in the hands of the private sector. The marketing system is established according to the type of production system practiced. For commercial chicken and hog producers, the marketing chain is relatively short and efficient with integrators employing their own processing and marketing facilities. In most cases, large producers possess marketing advantage because they sell in bulk and have access to marketing information. Most of these producers have direct marketing arrangements with one or few outlets or they have contracts with large processing and packaging firms on a regular basis.

Small producers have to rely on the existing channels of distribution available in their areas of operation. In most cases, these channels are long. Due to widely dispersed production and small-scale operation, marketing margins are expected to be high because of the high cost of product distribution.

At the farm level, livestock is usually sold on a per head basis. The price per head of cattle or hog, for instance is based on age, physical condition, and weight. Similarly, broilers are sold live on a per kilogram liveweight basis, at the age of 7-8 weeks and a liveweight of 1.3 to 1.5 kg per head. The usual buyers include the assembler-wholesalers and viajeros, local agents, and butcher-retailers. Broilers are usually sold in batches, i.e., one cage per hauling. In the case of cattle and carabaos, some farmers bring their animals in municipal livestock auction markets for disposal. These auction markets are used mainly for the sale of slaughter cattle, draft carabao, and cattle for fattening.

Traders who handle beef cattle and hog usually pass the animals to butchers and local traders. In the case of broilers, butcher-retailers usually do the dressing in their own market stall.

Issues and Concerns

Swine and poultry industries are heavily dependent on imported feed ingredients. Corn, which comprises 60-70 percent of the swine and poultry feed formulation, has to be imported in times of corn production shortfalls. The corn industry must, therefore, be able to catch up with the rapidly-growing poultry and swine industries.

There has been little effort to develop a "locally- adopted" breed of livestock and poultry animals, hence, importation of breeder stock is often resorted to. The government breeding stock development program should, therefore, be intensified.

Diseases and poor nutrition among animals, especially swine and cattle are prevalent. There has been no sustained animal health and disease program for the industry because of limited government budget and lack of competent animal technicians to do extension services. Costs of vaccines have also increased over time.

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Part II

Cereals

Chapter 3

Marketing of Rice by Small Producer Groups in Selected Regions of the Philippines

Georgina J. Bordado, Ma. Excelsis M. Orden, Lydia P. Oliva, and Alberto R. Domingo

Introduction

Rice is the most important staple crop in the Philippines. For decades, the government has been searching for ways and means to achieve self-sufficiency in this crop. It is not, therefore, hyperbolic to say that rice has become a political commodity and its production level can undermine or enhance the stability of the Philippine government.

Except for brief periods in the 1970s when the country became a net rice exporter, real self-sufficiency in rice is still as elusive as ever. Prospects in the near future, moreover, are quite bleak.

The wanton destruction of watershed areas, for one, is wreaking havoc to irrigation infrastructure. On the other hand, the continuous conversion of prime agricultural lands to nonagricultural uses contributes, in no small measure, to the decline in rice productivity (Cabanilla 1992). Ironically, the government itself worsens the situation by coming up with policies inimical to producers, discouraging, in the process, the influx of private investments in rice production. What is particularly alarming, however, is the fact that the rice farmers, who comprise the bulk of agricultural producers inthe country, are still mired in poverty. Largely unorganized, these farmers have become veritable pawns in the complicated marketing and production processes.

Organizing and empowering the small rice producers, in effect, now loom as a viable approach to address the perennial problems of rice insufficiency and poverty among small farmers. Specifically, the formation of small producer groups (PGs) can increase the farmers' bargaining power and allow them to capture a greater portion of the market.

Towards this end, the passage of the Cooperatives Law of the Philippines in 1990 and the Department of Agriculture (DA) policies and programs promoting production-marketing linkages, emphasized the commitment of the government to improve the lot of the small PGs. For once, PGs have been given more opportunities to participate in the development process, particularly in marketing of agricultural products. The potential for increasing productivity and income from marketing has been duly recognized. Increased revenues come from optimization of prices through greater bargaining power and timing decisions for selling, minimization of losses, maximizing value through quality improvement, and forward integration, among others (Bastillo 1991).

With the new interest on PGs as vehicles for improving farmers' welfare and enhancing rural development, the need to document their role, strategies, and their problems and constraints in carrying out their functions and achieving their objectives cannot be overemphasized. Thus, this paper focuses on the analysis of the marketing operations of ricePGs in five regions in the country, namely: Region II (Cagayan Valley), Region III (Central Luzon), Region V (Bicol), Region XI (Southern Mindanao), and Region XII (Central Mindanao). However, the two administrative regions of Mindanao were taken as one in the discussion of the results.

World Bank projections for rice in 1995 show the five regions as surplus areas, with Cagayan Valley topping the list, Central Mindanao, Central Luzon, Bicol, and Southern Mindanao coming in 3rd, 4th, 5th, and 8th, respectively. Central Luzon remains as the top region in terms of area devoted to rice, production, and yield from 1990 to 1991. Cagayan Valley is 4th in area harvested, 2nd in production level, and 3rd in rice productivity. Bicol, on the other hand, is 6th in terms of rice area and production level, and 10th in productivity classified as medium-yielding like that of Central Mindanao. Meanwhile, Southern Mindanao is 9th and 7th in area and production level, respectively, but is 2nd to Central Luzon in yield. Central Mindanao ranks 7th in rice hectarage, 8th in production, but 6th in terms of productivity.

Marketing in these regions is currently being done by PGs, private merchants, and the government. Producers, however, must be continuously motivated to increase rice production through the availability of reasonably priced inputs, infrastructure, and favorable output prices. In infrastructure development, the scenario is not exactly that rosy. The percentage of irrigated areas for the entirecountry is placed at 47 percent, while for the four regions, the level ranges from 28 to 48 percent. The problem in infrastructure is compounded by inadequate road network, particularly in Bicol and Cagayan Valley (Costales 1992). Central Luzon, on the other hand, has yet to recover from the ravages

of Mt. Pinatubo eruptions. There is, therefore, a need to assess what advantages PGs may have in rice marketing over alternative channels and whether the formation of PGs can induce marketing efficiency, as well as improve their social and economic well-being.

Objectives of the Study

In general, this study aims to analyze the marketing operations of rice PGs in the five regions and suggest research and policy recommendations for improving their performance.

The specific objectives are to:

1. provide an overview of the rice production-marketing linkages;
2. determine and analyze the various marketing services performed by these PGs;
3. evaluate and compare their marketing efficiency with alternative marketing channels/institutions;
4. identify and determine the effects of existing support services, related infrastructure, and policies on PGs;
5. analyze the marketing constraints and problems and the coping mechanisms of PGs;
6. evaluate the impact of PGs on the social and economic well-being of farmers;
7. recommend policy agenda for improving the overall performance of PGs; and
8. develop possible research-policy linkages to enhance research results utilization.

Research Methodology

Data Collection and Sampling Scheme

The study used both secondary and primary data. Secondary information included regional and commodity-level data to characterize the production-marketing linkages and the potential role of PGs in the five regions.

Sample PGs were selected through field validation of the lists of PGs obtained from the Cooperative Development Authority (CDA), and the Land Bank of the Philippines (LBP). Those which were operational or doing marketing functions composed the sampling population. A maximum of five PGs per region were selected. Southern and Central

Mindanao were treated as one region. From each PG, 100 to 150 farmer-members were randomly drawn. Except for Cagayan Valley, one half of the number of sample farmer-members and nonmembers were randomly selected in the service area of each sample PG. A minimum of one and a maximum of 10 traders operating in the same or adjacent area as the PGs were randomly selected. The breakdown of the number of respondents is shown in Table 3.1.

Primary data were collected through personal interviews. Key informant interviews were also undertaken to have an in-depth documentation of the PG operations vis-a-vis those of the private traders.

Analytical Techniques

Each PG was described with respect to its basic characteristics, marketing activities, support services availed of, and problems/constraints faced. As necessary, PG marketing operations were compared with those of the traders, particularly in assessing marketing efficiency. The latter was determined by analyzing price margins vis-a-vis services, costs, and net income. The impact of membership in the cooperative was analyzed by accounting for (a) the potential benefits that would accrue to farmer-members as per cooperative policies (e.g., giving of patronage refund, and dividends); (b) gain of members due to price differential by selling rice to the cooperative and not to traders; and (c) gain of members due to price differential by buying inputs from the cooperative and not from other input dealers; (d) gain of members due to interest rate differential for loans accessed through the cooperative and not through an alternative source; and (e) other income of the cooperative from other activities that could also accrue to its members. A comparative analysis

Table 3.1. Distribution of respondents by region.

Item	Regions				
	Cagayan Valley	Central Luzon	Bicol	Southern and Central Mindanao	Philippines
	Number				
PGs	5	5	5	5	20
Farmer-Members	150	152	137	100	539
Farmer Nonmembers	125	62	70	50	307
Traders	9	15	11	43	78

of farm income of members and nonmembers was also done to have an insight on the economics of rice production operations. The nonquantitative benefits were descriptively assessed based on farmers' attitudes, perceptions, and degree of satisfaction on PG services.

Limitations of the Study

Several problems confronted the researchers in the data collection and subsequent analysis. First, most producers, some PGs, and almost all the private traders do not keep written records. In Bicol, most PGs do not keep a list of the volume purchased from farmers, as well as selling and buying prices. This makes patronage refund allocation difficult. Second, the palay (paddy) sold was not weighed at the farm. Hence, it was difficult to determine the transport cost per unit, especially shrinkage cost. Third, the respondent PGs and traders generally hesitated to answer questions related to costs, prices, and margins.

Several problems were encountered in data computation. Some PGs and traders handled other businesses such as inputs, fruits, and vegetables. Consequently, cost allocation was based on the percentage distribution of the rice operations to the total business. Thus, chances of error in the allocation process were likely to have occurred.

Also, cooperatives which directly handled marketing were not easily identifiable. Available lists at the regional offices of the CDA do not indicate the commodities handled by the cooperatives, but only the nature such as multipurpose, credit, or noagricultural. The Provincial Cooperative Development Specialists were contacted, but did not have the list either. They were able to list down those whom they knew were doing the marketing function, but most of these cooperatives were nonoperational or actually handling other commodities. Hence, validation of the marketing PGs took a long time.

Empirical Findings

Characteristics of PGs

All of the sample PGs are multipurpose cooperatives (Table 3.2). In Cagayan Valley, all PGs were involved in rice production and marketing and sold agricultural inputs such as fertilizers and pesticides. One PG was also selling fruits and vegetables, and sell as a secondary crop. PGs in Bicol are marketing rice and palay, and at the same time, deal with agricultural inputs which are extended as credit in kind or for sale in cash

Table 3.2. Characteristics of rice PGs in four regions.

	Cagayan Valley	Central Luzon	Bicol	Southern & Central Mindanao	Philippines
Number Reporting	5	5	5	5	20
Nature/Function					
Multipurpose	5	5	5	5	20
Location					
Town-based	1			3	9
Barangay-based	4	5	5	2	11
Year established					
1971 - 1980	1		2		3
1981 - 1990	2	3	2	4	11
1991 - 1994	2	2	1	1	6
Capitalization (P)					
Initial					
50 & below	5	3	4		12
51 - 100					0
Above 100		2	1		3
Average	22	137	78		79
Current					
500 & Below		2			2
501 - 1000	1		1		2
1001 - 1500	1	1			2
1501 - 2000		1			1
Above 2M	3	1	4	5	13
Average (P million)	2.6	2.1	6.9	3.3	3.8
Membership					
Initial					
Below 40	2	2	4	a/	8

Table 3.2. (Continued).

	Cagayan Valley	Central Luzon	Bicol	Southern & Central Mindanao	Philippine
40 - 60	2	3			5
61 - 80	1			1	2
Average	46	37	37		40
Current					
Below 50			1		1
50 - 75		1			1
76 - 100	1	1			2
Above 100	4	3	4	5	16
Average	276	131	245	429	295
Net Annual Income ('000 P)					
20 and below	2	3	2	1	8
20-70	1		1	1	3
71-120	1		1	1	3
Above 120	1	2	1	2	6
Average	63	125	12	200	94

a/ No data available.

to members and nonmembers. In Southern and Central Mindanao, all sample PGs are marketing rice, selling agricultural inputs, and three are operating a consumer store.

Most PGs are located at the barangay, particularly in Cagayan Valley, Central Luzon, and Bicol. But in Southern and Central Mindanao, PGs are situated at the poblacion or town proper.

More than half of the PGs were established between 1981 and 1990. A few PGs in Bicol and Cagayan Valley were organized between 1971 and 1980. A number of PGs just recently started their operations.

The cooperatives derive their capital from any or all of the following sources: (a) members' share of capital; (b) loans and deposits; (c) revolving capital which consists of the deferred payment of patronage refund and interest on share capital; and (d) subsidies, donations, legacies, grants, aids, and such other assistance from any local or foreign institution whether public or private (CDA 1992). Capitalization of all PGs increased over time. On the average, initial capitalization was only P79 thousand per PG for all regions. Central Luzon PGs posted the highest level followed by Bicol and then Cagayan Valley. Most of the initial capitalization was P50 thousand and below. This was attributed to the fact that initially, PGs had to rely on internally generated capital. As membership increased, more external funds became available, and volume of business expanded. Thus, PGs were able to increase their capitalization. On the average, current capitalization per PG is P3.8 million. The majority of the PGs have current capitalization above P2 million. Bicol recorded the highest, while Central Luzon had the lowest.

Initial membership averaged only 40 per PG for all regions, with most PGs starting with less than 40. Over the years however, membership increased and reached an average of 295 at present. Currently, most PGs have more than 100 members. Southern and Central Mindanao registered the highest number followed by Cagayan Valley and Bicol. Ironically, Central Luzon, which is considered as the rice bowl of the Philippines, recorded the lowest current membership. This can be attributed to the presence of one or more PGs in each barangay in the region.

All PGs serve both members and nonmembers. Farmer-members can avail themselves of production loans which areusually given in kind and the goods in the consumer store. Nonmembers, on the other hand, can also buy in cash the agricultural inputs sold by the PGs, but they cannot purchase on credit. Repayment of production loans and the purchases on credit from the consumer store are usually in terms of palay. In Bicol, nonmembers are also beneficiaries of the irrigation project of the PG. They pay the irrigation fees to the cooperative.

All PGs are registered with the CDA. Some of them were initially Samahang Nayon (Village Association), while others were organized by the DA for each delivery of the technical services.

In general, PGs gained from their operations. It was only in Bicol where two PGs incurred big losses because of the typhoon in 1993 which damaged the fertilizers on stock and caused the low utilization of the tractor for hire. The interest and depreciation expenses were unduly large compared with the rent for tractor use. Meanwhile, Southern and Central Mindanao earned the highest net annual income followed by Central Luzon and then Cagayan Valley.

Community Profile of the PG Areas

PGs are located in 20 municipalities, more than half of which are barangay based (Table 3.3). On the average, the municipality had a rice area of 4,913 ha. Being a major-rice producing region, Central Luzon has the biggest rice hectarage which is more than twice as much as the sample average. Cagayan Valley has 2,666 ha, the lowest so far. The riceareas per sample municipality in Southern and Central Mindanao are also bigger than those in Bicol.

More traders than PGs operate within the same location. This is quite pronounced in Central Luzon.

Likewise, rice production per sample municipality was highest in Central Luzon and even higher than the average for all regions. Bicol posted the lowest level. The municipalities covered in Bicol also produce other crops such as coconut, corn, vegetables, coffee, banana, and abaca. Cagayan Valley also produces the same commodities, except abaca.

In Central Luzon, the sample PGs are located in five municipalities in three provinces. San Miguel in Bulacan where PG 4 is located, is the largest in terms of land area, population, rice area, and number of private traders. This is followed by San Jose (PG 2), Muñoz (PG 1), and San Isidro (PG 3). Muñoz ranks third in terms of area planted to rice, but obtained the highest rice production in 1993 because of the availability of irrigation facilities, quality seeds, and support services from government organizations (GOs) and nongovernment organizations (NGOs). The Philippine Rice Research Institute (PHILRICE), National Postharvest Institute for Research and Extension (NAPHIRE) and Central Luzon State University (CLSU), institutions mandated to develop rice production and postharvest technologies, are located in this town.

Two PGs in Central Luzon are strategically located along the national highway. PG 1 is only a short distance away fromthe town proper and its major outlet, a federation of cooperatives. PG 2, on the

Table 3.3. Community profile of the PG area in four regions, 1993-1994.

Item	Cagayan Valley	Central Luzon	Bicol	Southern and Central Mindanao	Philippines
No. of PGs	5	5	5	5	20
No. of Municipalities per PG	1	1	1	1	1
Average Cropped Area per Municipality (ha)	2,666	9,500	3,151	4,333	4,913
Average No. of Traders per Sample Municipality	2a/	119	4a/	b/	
Average No. of PGs per Sample Municipality	2a/	42	3a/	17	16
Production (mt)					
Rice	33,328	39,600	16,724	26,380	23,206
Other crops	75a/	b/	18,239	b/	9,129

a/ Barangay level data.
b/ Data not available.

other hand, is only about 5 km from the city proper and from the National Food Authority (NFA). Three PGs are barangay based. PG 3 is connected by a dirt road to the town proper, while PG 4 and PG 5 have good roads which make them more accessible to the potential buyers. Farming is the major source of income of thousands of farmers in all PG areas. These farmers are registered members of various cooperatives, whether primary agricultural cooperative or other types of cooperative. Furthermore, the number of traders in the different areas vary with more than 130 in San Jose, San Miguel, and Balanga and less than 100 in Muñoz and San Isidro. Across all communities, there are more retailers (46%) than any other types of grain traders.

In Cagayan Valley, the sample PGs are located in five municipalities in four provinces of the region. Two PGs are in Isabela, and one each in the provinces of Cagayan, Nueva Vizcaya, and Quirino. Bugallon Proper, Ramon, Isabela (PG 4 area) is the highest in terms of area devoted to rice production, but second only to Antonino, Alicia, Isabela (PG 3 area) in terms of volume of production. Mangandingay, Cabarroguis,

Quirino (PG 3 area) has the lowest rice hectarage as well as production. Rice farmers dominate other types of farmers in all PG locations. The number of PGs in the service area of the sample cooperatives ranges only from two to three, while the corresponding number of traders is two to five. Market outlets of the PGs are the transient buyers/viajeros, contract buyers, and local big traders within the samemunicipality, nearby towns, and Metro Manila.

On the other hand, PGs in Bicol are situated in one city and four municipalities in four provinces of the region. Average hectarage planted to rice per sample municipality is 3,151 ha with an average production of 16,724 mt. There are at least two PGs in the area per barangay and four traders doing business in the same location. The usual market outlets are the PG itself and other traders or consumers within the same municipality/city or nearby towns and the provincial NFA.

Meanwhile, in Southern and Central Mindanao, PGs are located in five different municipalities in three provinces of the region. Norala, South Cotabato (PG4 area) recorded the highest cropped area and volume of rice production, while Mati, Digos, Davao del Sur recorded the lowest. On the average, there are least 17 PGs and more than 43 traders handling rice in the area. The usual market outlets are the PG in the area and the traders and consumers within the same municipality or nearby towns and the provincial NFA.

The Production-Marketing System

Figs. 3.2 to 3.5 show the marketing flow of rice by region and the average for all regions is shown in Fig. 3.1. Rice farmers sell 52 percent of their palay to their PGs, 35 percent to other cooperatives in the area, and 3 percent to NFA. PGs either store the product or sell them at once as 87 percent palay or mill the palay and sell rice (13%) to other traders (82% as palay), NFA (8% palay), or consumers (10% rice). On the other hand, traders in general sell 23 percent as palay and mill palay and sell 77 percent rice.

In Cagayan Valley, palay changes hands at least four times before it finally reaches the consumer (Fig. 3.2). Specifically, farmer-members sell the bulk of their palay to the PG. A small portion goes to other farmer associations, local traders, and viajeros. Nonmembers, on the other hand, also dispose 58 percent of their palay to the PG, while the rest are channeled to NFA, local traders, transient buyers, and millers. Meanwhile, the PG sells 72 percent of the palay to local traders and 28 percent to NFA. Other important outlets of the PG are the wholesalers/retailers, retailers, millers, and transient buyers.

Fig. 3.3 shows that in Central Luzon, farmers prefer to sell to at least six outlets: their PGs, the wholesalers, agents, viajeros, wholesaler-

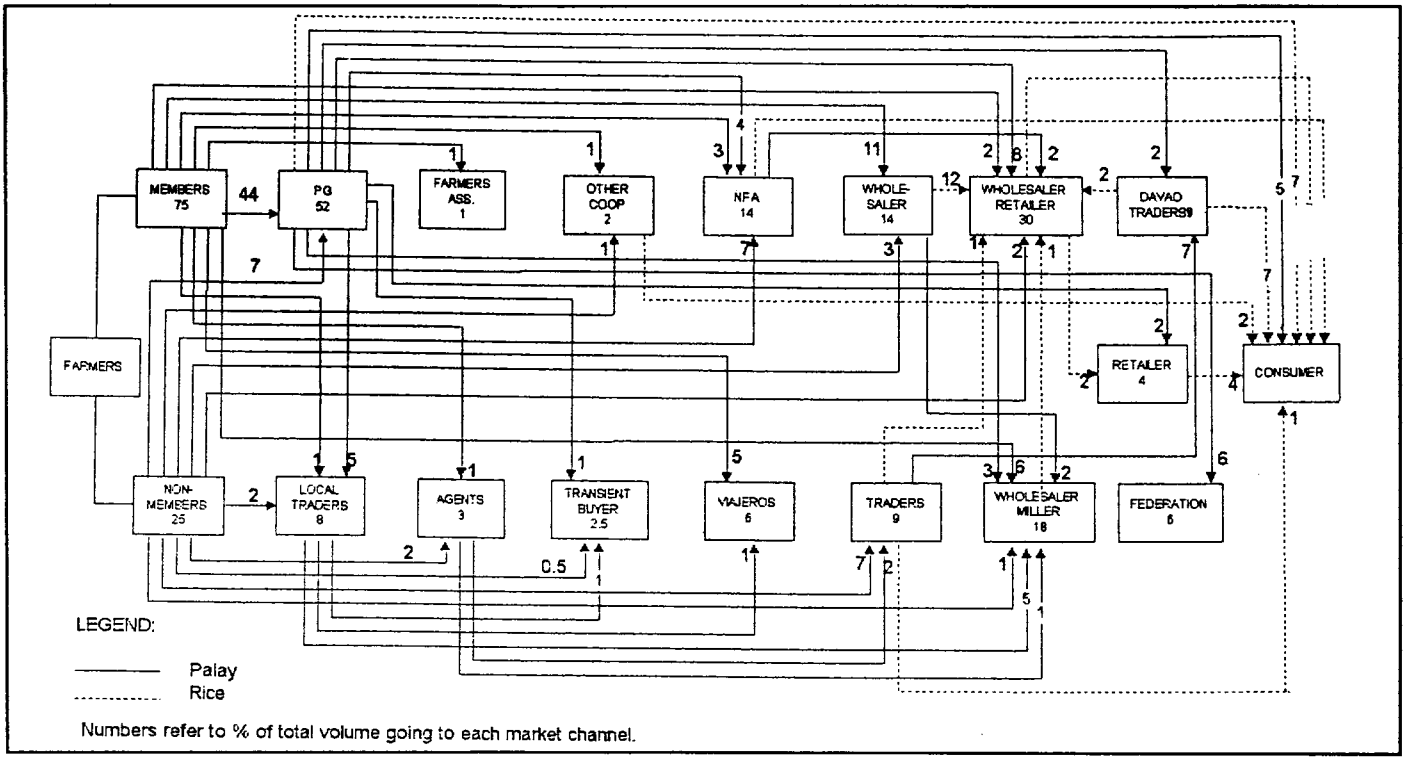

Fig. 3.1. Flow diagram of the market channels for palay and rice, four regions, Philippines, 1993.

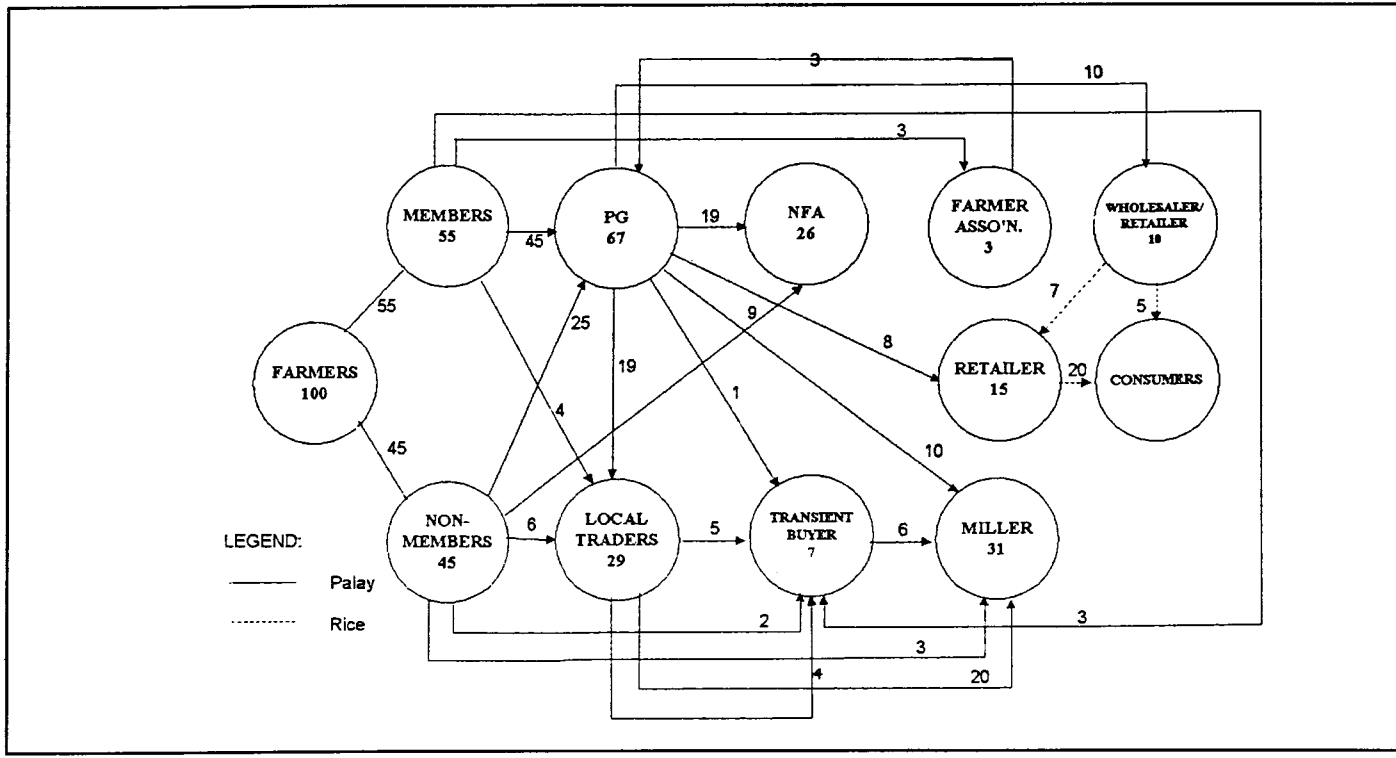

Fig. 3.2. Flow diagram of the market channels for palay and rice in Cagayan Valley, 1993.

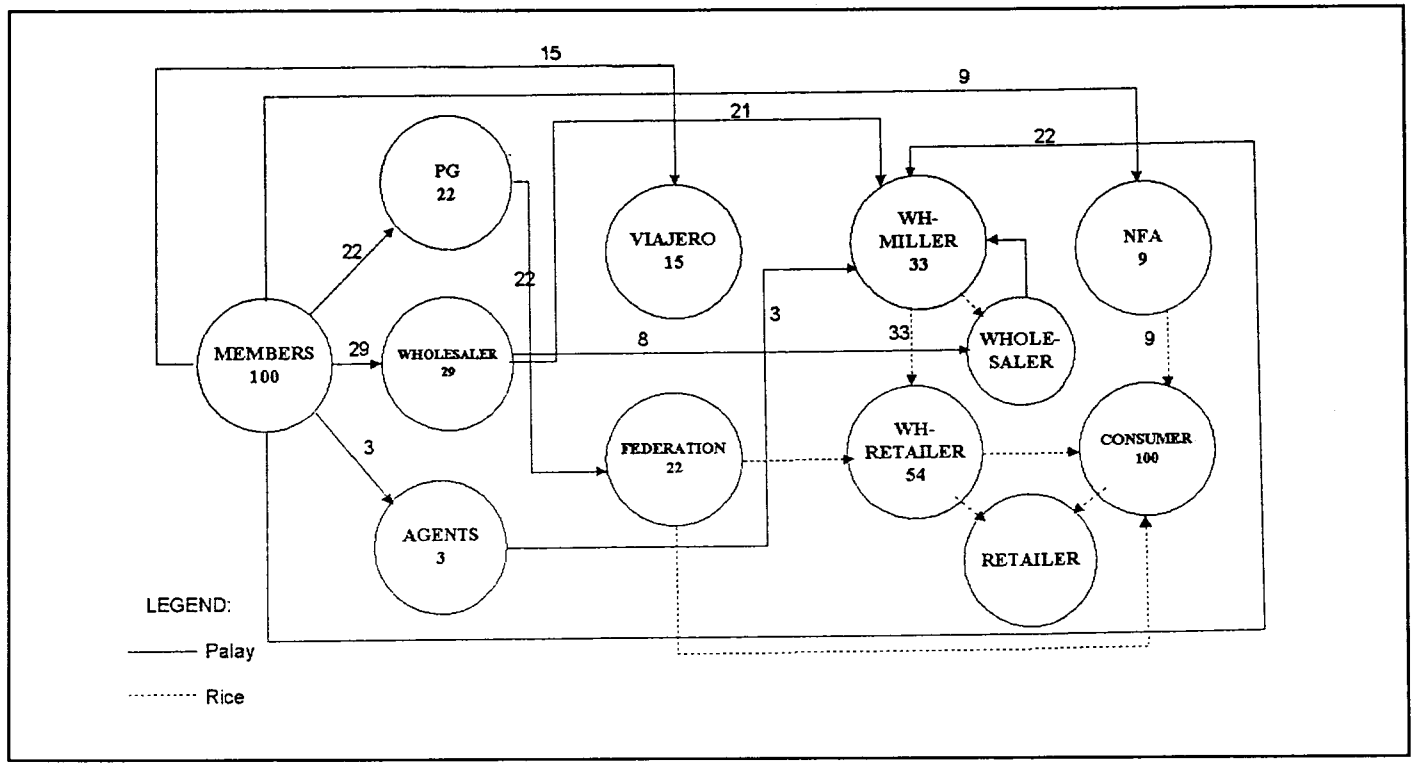

Fig. 3.3. Flow diagram of the market channels for palay and rice in Central Luzon, 1993.

miller, and NFA. PGs, however, absorb only 22 percent of the total output of farmer-members which in turn are all sold as palay to the federation. The wholesalers that absorb most of the farmers' produce sell palay mostly to wholesaler-millers and the rest are sold to other wholesalers. The wholesaler-millers in turn dispose milled rice to the wholesaler-retailers and eventually to consumers. The agent of the wholesaler-millers channels all his procured palay to the wholesaler-miller.

In Bicol, farmer-members dispose products to at least seven outlets, while nonmembers sell to five channels (Fig. 3.4). Fifty-seven percent (57%) of the members' palay is absorbed by PGs, while the smallest portion goes to the assembler/wholesaler/millers. PGs in turn sell 55 percent asrice and the rest as palay used by producers as seeds. The produce of nonmembers, on the other hand, are mostly (40%) channeled to assembler/wholesalers who in turn sell palay to wholesaler-retailers. The NFA, miller, and assembler/ wholesaler outlets of farmer-members also sell palay to wholesaler/retailer. The other cooperative in the PG area that buys nonmember's palay convert them into rice and sell directly to consumers. Nonmembers can also dispose palay directly to the wholesaler/retailers who finally sell rice to consumers.

Meanwhile, Fig. 3.5 shows that in Southern and Central Mindanao, all of the farmer-members' produce are channelled to the PGs. The latter in turn move 32 percent of the procured produce as palay to wholesaler/ retailers and 32 percent as rice directly to consumers. The rest of the palay, 20 percent and 8 percent go to local traders and NFA, respectively. The rest of the PG rice are sold to Davao traders. Meanwhile, the nonmembers sell 79 percent of their produce to traders as palay and the other 21 percent to agents. The latter, however, also channel all procured palay to the traders who in turn dispose 4 percent palay to local traders and the 66 percent to Davao traders. Traders also convert part of their palay into rice then sell 26 percent to wholesalers/retailers and 4 percent directly to consumers.

Farmers' Attitudes Toward PGs

Reasons for membership vary, but most farmer-members were motivated by the services/benefits that could be derived from cooperative membership (Table 3.4). For Cagayan Valley, other reasons of farmer-members included fostering of unity among farmers and the cooperative as a ready source of capital. In Bicol, some members joined the cooperative because they could avail themselves of low-interest production loans. On the other hand, to some farmer-members in Southern and Central Mindanao, joining the cooperative was a means to increase income and ensure a market for their output.

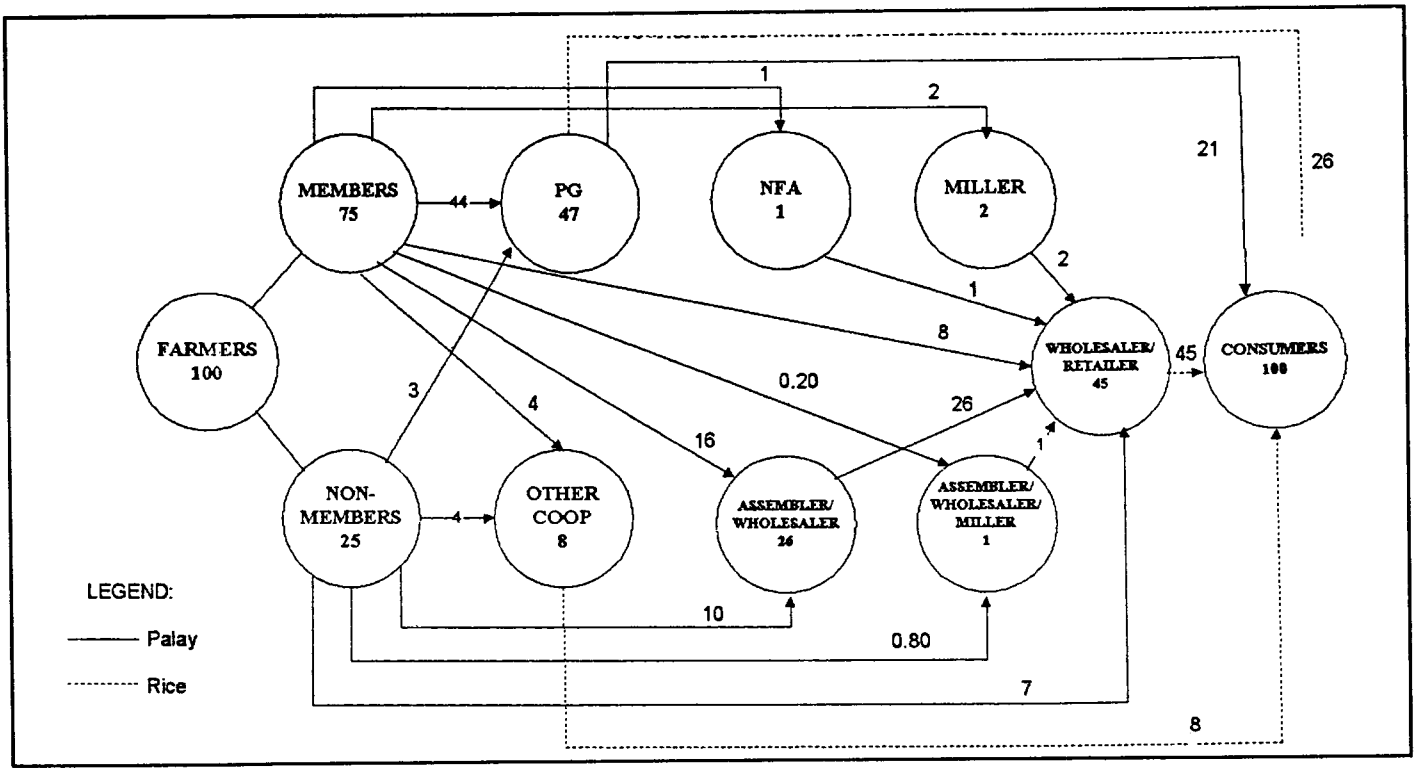

Fig. 3.4. Flow diagram of the market channels for palay and rice in Bicol, 1993.

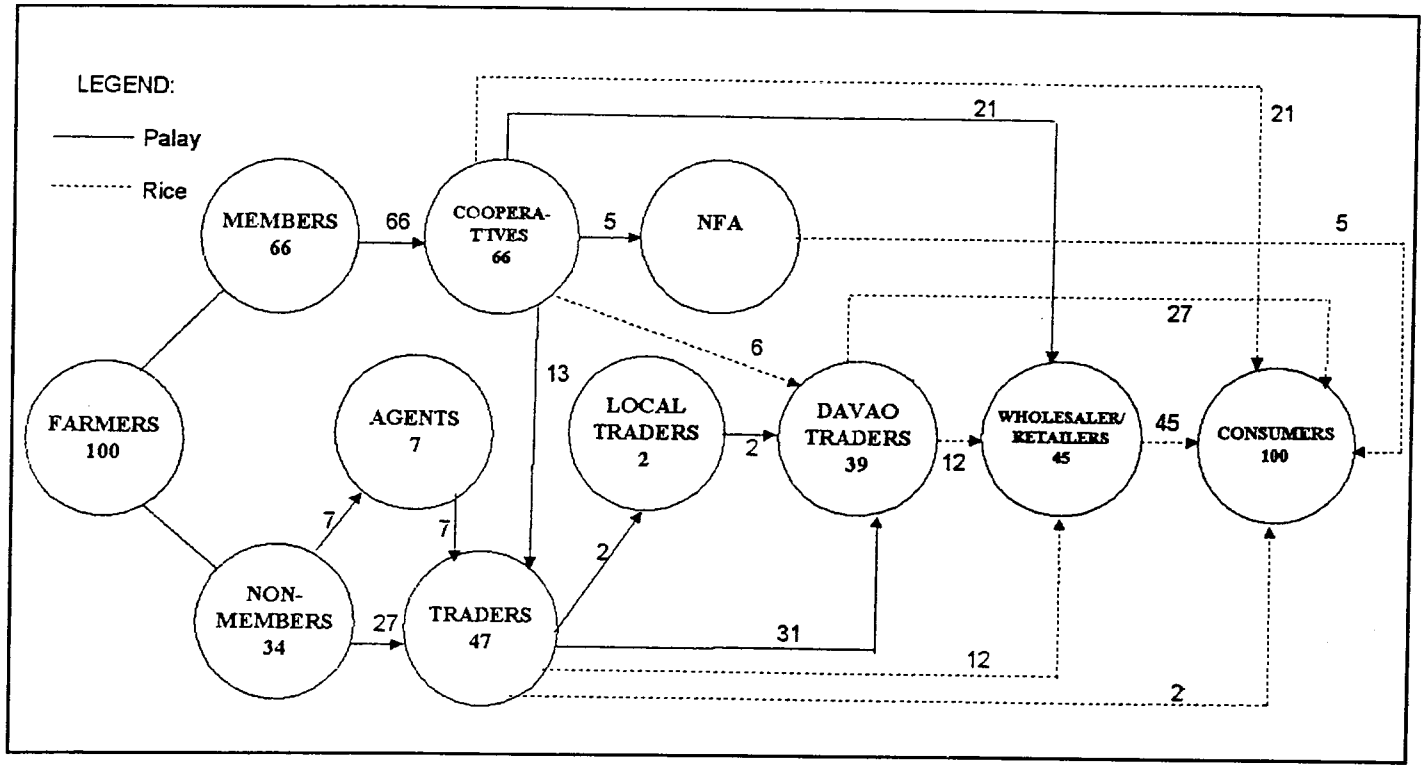

Fig. 3.5. Flow diagram of the market channels for palay and rice in Southern and Central Mindanao, 1993.

Table 3.4. Farmer-members' attitudes towards PGs in four regions, 1993-1994.

Item	Cagayan Valley	Central Luzon	Southern & Central Mindanao	Philippines a/
No. of Farmers	150	137	100	387
Reasons for Membership				
Avail of coop benefits/services	79	27	50	53
Ready source of capital	66	24		34
Uplift living conditions/increase income	19	14	39	22
Foster unity among farmers	49	1		19
Have a sure market			26	7
Convinced by friends/relatives		4	13	5
Advise of LBP officers	11			4
Others	7	3		4
Ways of Supporting PG				
Attendance to regular/meetings participate in discussions	79		91	54
Selling of produce to PG	57	48	35	48
Patronize/Promote products	38		29	22
Payment of annual dues and other contributions	47			18
Promote use of PG postharvest facilities	38			15
Participate in other PG activities (e.g., livelihood projects, bldg. construction, parties)		12	30	12
Working voluntarily		7		2
Comments on Potential of PG				
Has a great potential if:				
Complete in postharvest/marketing facilities and equipment	28		52	24
Managed by skilled and competent employees and officers	28		31	19
No comment		39		14
All problems of farmers can be addressed		31		11
There is adequate capital			43	11
All members will participate in all PG activities			29	7
Address financial needs of farmers		15		5
All members will sell to PG			14	4

[a] Total exceeded 100 percent due to multiple responses.

As members, farmers have to support the operations of the PG. Attendance in regular meetings and sale of output to the PGs were considered by the farmers as ways of supporting the PG. Other forms of support were patronizing the product (e.g., buying rice and other goods sold in the PG's consumer store) as in the case Cagayan Valley and Southern and Central Mindanao; the payment of annual dues and other contributions and the promotion of the use of postharvest facilities, as in Cagayan Valley; participation in all PG activities (e.g., livelihood project, building construction, Christmas party) as in Bicol and Southern and Central Mindanao; and working voluntarily as in Bicol.

Generally, members believe that the PGs have great potential for success if marketing facilities are available, while an equal number do not want to say anything about it. Cagayan Valley farmer-members consider the availability of postharvest facilities and management by competent and skilled officers as necessary conditions for PGs to attain success. Thirty-nine percent of the farmers in Bicol do not want to say anything about the potential for success of their PG, while 31percent think that if all members' problems will be addressed, the potential for success of the PG is great. Meanwhile, the Southern and Central Mindanao farmers regard the availability of capital as an essential factor for the success of the PG, as well as the participation of all members in all PG activities.

Marketing Operations and Services

Marketing functions such as transporting, processing, grading, storing, and providing market information are necessary for the products to reach the consumers at the right quantity, quality, place, and time. Marketing channels or intermediaries are involved in moving products from their production consumption points. Just like the traders, PGs may perform one or a combination of these marketing services to add value to the products and obtain a greater share of the margin. Costs, therefore, will be incurred, and will vary depending upon the type and number of services performed.

This section describes the various marketing services performed by the rice PGs and traders in the four study regions.

Marketing Services Performed by PGs and Traders

Assuming the role of the traders, PGs perform almost the same number of marketing services as the traders, although the number of PGs and traders practicing each of these services varies (Table 3.5). The most common marketing services are procurement, processing, storage, transport, packaging,drying, grading, retailing, and financing. Provision

Table 3.5. Marketing services performed by the PG and traders by region, 1993-1994.

Marketing Services	Cagayan Valley		Central Luzon		Bicol		Southern and Central Mindanao		Philippines	
	PG (n=5)	Trader (n=9)	PG (n=5)	Trader (n=15)	PG (n=5)	Trader (n=11)	PG (n=5)	Trader (n=20)	PG (n=20)	Trader (n=78)
	Percent Reporting									
Procurement	100	100	20	100	100	100	100	100	80	100
Processing	20	0	0	40	100	82	80	53	50	51
Storage	100	100	40	27	80	73	60	72	70	65
Transport	100	20	80	60	80	27	60	100	80	76
Grading	100	100	20	27	100	100	20	0	60	27
Packaging	80	60	20	13	100	100	100	100	75	80
Drying	80	100	40	40	100	100	60	81	80	77
Retailing	20	20	0	40	100	100	80	51	50	54
Market Information	80	100	100	67	100	0	0	0	70	20
Training	100	0	100	7	100	0	100	0	100	9
Market and Product Promotion	20	0	0	40	0	0	0	0	5	0
Market Linkaging	0	0	100	100	0	0	0	0	25	19
Financing	100	100	100	67	100	82	100	100	100	91
Wholesaling					100	64			25	9

of market information and training are done mainly by PGs. Only a few PGs perform product promotion and market linkaging. These activities are also uncommon among the traders.

Procurement. Because of the absence of drying and storage facilities at the farm, except in Central Luzon, all PGs procure palay from both members and nonmembers either on a picked-up or delivered basis. By the nature of their function, all traders do the procurement function. PGs usually pick up the palay from the source, while most traders procure palay both on picked-up and delivered bases. The palay procured from members is, in most cases, the payment in kind of the farmers who have accessed production loans from the PG or the traders. All PGs extend financial assistance to farmers either in kind (inputs or consumer goods) or cash advances payable also in palay or cash. Similarly, the majority of the traders usually provide cash advances which could be paid in palay or in cash. Palay is the predominant form of payment for the loans accessed by farmers from PGs and traders.

In Central Luzon, only one out of the five PGs is involved in actual procurement. Other PGs only facilitate the sale of farmers' produce to NFA and other outlets. They procure both fresh and sun-dried palay which represents the payment in kind for the production loans. Procurement is generally done in May, October, November, and December.

Storage. On the average, about 70 percent of the PGs and 65 percent of the traders store their palay. In Cagayan Valley, all PGs and traders practice storage, four of which are utilizing their own warehouses, while one leases a warehouse for 1,500 per year. However, during peak harvest/buying period when procured palay cannot be accommodated. PGs utilize the storage facilities of the Northern Philippine Grain Complex (NPGC) which is 8 km from the PG office.

In Central Luzon, two out of five PGs and four out of 15 traders store their procured palay. One PG accepts temporary storage of farmers' produce in a make-shift warehouse attached to the office. These are credited as payment in kind when the market price increases to a reasonable level or until such time that payment for loan is due. Another PG is equipped with a 3000-bag storage facility which is provided to members at 10 centavos/cavan per day for one to two months. Among traders, only those wholesaler-millers utilize warehouse. All other traders deliver their procured palay directly to the rice mill.

Meanwhile, in Bicol and Southern and Central Mindanao, the majority of the PGs and traders store their palay. Four PGs in Bicol have their own or leased small warehouses, part of which is used as office or storage for the agricultural inputs for sale or for distribution as credit in

kind to members. The traders have their own warehouse too. In Mindanao, three PGs and 31 traders store the procured palay.

Drying. The procured palay is assembled at the PG office and stored there for a while or converted into rice for wholesaling and retailing. The paddy can still be redried depending upon the quality of procured palay from the farmers.

Four PGs and all traders in Cagayan Valley dry their palay. These PGs use their concrete pavements for drying. Two PGs have mechanical dryers which are, however, nonfunctional. Redrying is done to further reduce the moisture content of the procured paddy from the farmers in cases where the moisture requirement of 14 percent is not strictly adhered to.

However, in Central Luzon, two of the PGs and 6 out of 15 traders dry the palay. PGs dried the fresh paddy to 14 percent moisture content. Traders have access or own facilities for drying such as concrete pavements. On the other hand, the PGs generally do not have funds to buy drying facilities.

All PGs and traders in Bicol dry the palay. This indicates that farmers' paddy is not thoroughly dried because of the absence of drying facilities. The paved highways sometimes become the drying area of some farmers causing traffic obstruction or accidents when stones used as demarcation lines are run over by speeding vehicles. Redrying of the palay is practiced by PGs and traders to attain the desired moisture content and be able to charge a much higher price. All PGs own drying areas and one has a mechanical dryer, but nonfunctional. Traders, on the other hand, also have drying pavements in front of their buying stations.

In Southern and Central Mindanao, most PGs and the majority of the traders also dry the palay.

Grading. Palay is generally graded based on variety, moisture content, purity, and the general grain appearance. Moisture content is usually determined through the feel, biting, grinding, and ocular methods.

All PGs and traders in Cagayan Valley grade the palay. PGs grade palay based on the variety, moisture content, purity, and the general grain appearance. Two PGs use a moisture meter, while the others use a disk stone grinder to determine the moisture content. Purity and general appearance of the grain are determined by ocular inspection.

PGs and traders in Central Luzon buy palay based on variety and moisture content. Two PGs grade the palay, particularly the payment in kind. Palay is a mostly the IR varieties. PGs ensure that only quality palay is sold by farmer-members. This is done by accepting palay as payment

for loans and any surplus for sale that are sundried. In this case, an additional P0.50 per kilo is paid as an incentive.

All PGs and traders in Bicol grade palay. The unavailability of drying facilities in most farm necessitates the immediate sale of wet paddy by most farmers. A shrinkage allowance of 20 percent is then automatically deducted from the sale. One PG uses a moisture tester, while the rest use only the feel method.

However, in Southern and Central Mindanao, only one PG and no trader practices grading of palay.

Packaging. The majority of the PGs and traders provide plastic sacks which can accommodate 50 kg of dried palay. Farmers usually do not want to use their own sacks because these are pricked when getting palay samples to determine moisture content.

In Bicol and Mindanao, all PGs and traders lend sacks to their palay suppliers. In Central Luzon, farmers provide the sacks. One PG provides free sacks to farmer-members. These sacks are provided by the Federation to this PG and are passed on to the farmer-members for all palay for delivery or sale to the PG and to the federation. On the other hand, the majority of the PGs and traders in Cagayan Valley issue sacks to their customers to ensure that their palay will be channeled to them.

Processing. In Cagayan Valley, only one PG converts palay into rice and retails this to consumers. But there is no trader processing the palay. This PG has acquired a rice mill along with a warehouse from the Postharvest Facilities Assistance Program of the DA. About 90 percent of the procured palay are milled by this PG. The reverse is true in the case of Central Luzon. None of the PGs does any milling. The palay procured by one is sold to the Federation who has milling facilities.

Meanwhile in Bicol, all PGs are converting palay into rice which is sold wholesale and retail. Nine out of 11 traders are also milling palay into rice and all are retailing rice, but only seven are engaged in wholesaling.

In Southern and Central Mindanao, four PGs are milling palay into rice and only one half of the traders perform this function.

Transporting. In Cagayan Valley, all PGs provide transport services to both members and nonmembers. Two PGs use their own 10-wheeler trucks in hauling palay either from the different farmers' assembly point to the PG or from the PG to its outlets. In addition, one of the PGs also uses its own forward truck for transport. A PG which does not have any transport facility usually rents a forward truck. On the other hand, only one-fifth of the traders provide transport facilities for the palay being

procured. Most of the farmers have to deliver their produce and assume the transport cost.

In Central Luzon, one of the services that the PGs provided is the transport of palay from the farm to the cooperative free of charge or at a cost lower than the prevailing rates. Only one PG provides free services to members delivering palay as payment-in-kind. This is done to encourage members to pay their loan in kind upon harvest. Two PGs hire transportation facilities for farmers for collective transport of their produce, the cost of which is shouldered by the members. Another PG offers the cooperatives transport facility at minimal cost. One PG does not provide any kind of transport assistance to farmer-members.

The majority of the PGs in Bicol use transport facilities in picking up farmers' produce, thus, assuming the cost. While only one-fourth of the traders do this since the most of the procured palay are delivered by the farmers who assume the transport cost.

In Southern and Central Mindanao, only three PGs and all traders provide transport facilities. All PGs pick up palay from their sources, but the majority deliver them to the buyers.

Retailing/Wholesaling. Ten out of 20 PGs and 42 out of 78 traders are retailing rice. Rice among the PGs is usually retailed through their consumer stores. Only one-fourth of the PGs are selling on wholesale basis and only seven out of 78 traders do this. Retail prices of the barangay-based PGs and traders are pegged at the prevailing market price in urban or market centers. Wholesale prices are the same as retail prices, but transport cost is minimized because of bulk selling.

In Cagayan Valley, only one PG and one trader sell rice on retail and none was into wholesaling. Meanwhile, in Central Luzon, only six out of 15 traders and no PG practice rice retailing. Both PGs and traders do not sell rice on wholesale basis. PGs in Central Luzon just procure palay and sell as palay to a federation of cooperatives or only facilitate sale of farmers' produce.

Southern and Central Mindanao PGs are also mostly retailers of rice, while only half of the traders do this function.

Financing. Financing can be in the form of production loans in kind, e.g., fertilizers, chemicals, seeds, or as cash advances with the assurance that the produce will be channeled to the creditor. Loans can also be paid in cash.

All PGs and almost all traders provide financial assistance to the farmers. In Central Luzon and in Bicol, a few traders do not extend loans to farmers in whatever form. This can be due to the fact that the PGs already fill in this need. Moreover, most traders are located in the urban centers and do not have regular buyer relationship with the farmers.

Cagayan Valley, PGs provide production loans to members. Production loans can be availed at a maximum of P6,000/ha which is payable within 6 months. Interest rate ranges from 7 to 10 percent, excluding service fee which ranges from 1 to 2 percent for 6 months.

Central Luzon PGs provide palay production loans of P6,000 to P8,000/ha with interest rates ranging from 1.5 to 2.3 percent per month. The loan comes in the form of inputs such as fertilizers and chemicals and cash portion for land preparation. The proportion of cash and kind varies by PG, from 30:70 to 45:55 percent. The maximum amount of loan for each member is limited to 4 ha for four PGs and 5 ha for one PG. Requirements for loan application are certificate of landholding and farm plan and budget. Eligibility for new loans differs by PG. For one PG, past loan should have been repaid at least 80 percent. If the farmer cannot pay his loan due to crop failure for three successive croppings, the management takes over the farm. For other PGs, nonrepaymentfor one season makes farmer-members ineligible for new financing. Farmers who cannot pay for 2 years are subjected to legal action.

In Bicol, one PG provides inputs and cash advances to farmer-members up to P5,000/ha. Another PG provides loans up to P6,000 which are payable within 120-180 days. Four PGs extend production loans up to P12,000 payable in 6 months. A providential loan of P2,000 for members payable within 4 months is also extended by at least two PGs.

All PGs and traders in Southern and Central Mindanao provide financial assistance. The former usually gives loans in kind, while the latter give in the form of cash advances.

Market information. One-third of the PGs provide market information, while only one-fifth of the traders extend the same service. All PGs in Central Luzon and Bicol and the majority of the PGs in Cagayan Valley, but none in Southern and Central Mindanao do provide this service. All traders in Cagayan Valley and most in Central Luzon, but none in Bicol does the same function. As a service, market information refers mainly to prices.

During peak periods, market agents are commissioned by Central Luzon PGs to gather prices from three traders in the locality for three to five times a week. These prices serve as the bases of the PGs in setting the buying price. Officers of the PGs provide the information to members who come to the office. Daily prices, however, are not properly recorded. This prevents them from using the previous prices as bases forprice forecasting. Moreover, these prices are listed in bulletin boards for each reference of farmer-members. And none of the PGs are

equipped with telecommunication facilities which can be used to monitor and disseminate prices to potential buyers and members. The absence of these facilities makes it difficult for the PGs to contact potential markets. Interestingly, none of the PGs have considered the NFA as a regular source of price and other market information, inspite that NFA monitors price twice a week.

In Bicol, all PGs post buying prices in their offices. No one among the sample traders do this.

Market linkaging. Four PGs in Central Luzon established linkages with the NFA. The palay as payment-in-kind of the farmers for their production loans from the cooperatives can be sold to NFA and from the sales, the corresponding amount of the farmer's loan can be deducted. Market linkaging also takes place between PGs and private traders for a portion of the farmer-members marketable surplus which cannot be sold to NFA. However, this activity with private traders is being arranged on a per season basis only. Linkaging of one PG is being done with the existing federation in the locality.

Market and product promotion. PGs and traders seldom perform market and product promotion. This marketing activity is done only by one PG in Cagayan Valley. The PGs submit to NFA rice samples which the latter presents to prospective rice dealers. Orders are taken in by NFA and relayed to the PGswho deliver to the buyers the required quality and volume of rice.

Training. All PGs in the study regions provide training programs/ seminars for members and officers. The trainings/ seminars, however, focus mainly on premembership, management, business development, bookkeeping, and production technologies for rice, fruits, and animals.

Marketing arrangements. PGs usually pick up the farmers' produce from the farms (Table 3.6). Most of the traders perform a combination of picked-up and delivered basic of procurement. In Southern and Central Mindanao, all PGs procure directly from the farms.

Among the PGs, the mode of payment is more of the cash advance. But a number equally practices cash on delivery, on credit, and cash and credit. On the other hand, the majority of the traders do not pay at once. Very few give cash advance.

In Central Luzon, the PG procures palay by directly picking them up from the farmer's place, while the traders have them delivered to their buying stations by the farmers. The PG pays cash advance just like the majority of the traders. However, the PG's buying price is based on what

Table 3.6. Marketing arrangements of PGs and traders by regions, 1993-1994.

Marketing Services	Cagayan Valley		Central Luzon		Bicol		Southern and Central Mindanao		Philippines	
	PG (n=5)	Trader (n=9)	PG (n=5)	Trader (n=15)	PG (n=5)	Trader (n=11)	PG (n=5)	Trader (n=43)	PG (n=20)	Trader (n=69)
	Percent Reporting									
A. Buying										
Mode of Procurement										
Picked-up from source	80		100	40	60		100	98	85	70
Delivered to buyer	20			60	20	91			10	27
Both					20	9		2	5	3
Mode of Payment										
Cash on delivery					40	100		98	10	77
Credit				27			40	2	10	7
Cash advance				73			60		15	16
Combination										
Cash on delivery and cash advance	100		100		20				55	
Cash and credit					40				10	
B. Selling										
Mode of Sale										
Picked-up by buyers	20		100	40	60	91			45	23
Delivered by buyers				53	40	9	80	100	30	75
Both	80			7			20		25	2

Table 3.6. (Continued).

Marketing Services	Cagayan Valley		Central Luzon		Bicol		Southern and Central Mindanao		Philippines	
	PG (n=5)	Trader (n=9)	PG (n=5)	Trader (n=15)	PG (n=5)	Trader (n=11)	PG (n=5)	Trader (n=43)	PG (n=20)	Trader (n=69)
	Percent Reporting									
Mode of Payment										
Cash on delivery				93	60	100	40	100	25	98
Credit				7			40		10	2
Cash advance									0	0
Cheque			100		40				35	0
Combination										
Cash on delivery and credit							20		5	0
Cash on delivery and cash advance	100								25	0

a/ Less than 100 percent for PG due to only one reporting for Region III.
b/ No data available.

the traders offer. Price of one PG is about P0.10 more than that of the traders. Moreover, additional incentives such as free transport and sacks are provided by the PG to farmer-members for loan payments and low transportation charges for farmers'marketable surplus. Selling arrangements also differ. While the PG product is picked up by the buyer, the traders deliver either rice or palay to the buyer. The PG, however, receive the cheque payment, while traders receive cash on the spot.

In Cagayan Valley, most PGs pick up the products directly from the farmers' place since all of them already pay cash in advance. On the other hand, the buyers may either pick up or have the PGs deliver their product to them. All PGs are paid cash in advance by their buyers.

Meanwhile, most PGs in Bicol pick up palay from the farm and pay cash on the spot. They may, however, opt to pay part in cash and part on credit. On the other hand, the majority of the traders receive direct deliveries of palay from the farmers. All traders pay cash upon delivery. When selling, the majority of the PG products are picked up by the buyers who then make cash payment.

Likewise, all PGs and the majority of the traders in Southern and Central Mindanao pick up palay directly from farmers' place. However, while most PGs pay cash in advance, almost all traders pay cash upon delivery.

When selling, the majority of the PG and all the traders take their products to the buyers' place. Table 3.6 shows the marketing arrangements of PGs and traders by region.

Comparative Marketing Operations and Efficiency

In performing the marketing services, PGs and traders use resources which have a price. Costs are, thus, incurred and PGs and traders must shoulder the risks and uncertainties. Costs must be recovered and a reasonable return on investment must be obtained. Costs are paid out of the margins between the selling and buying prices however, they vary depending upon the services rendered, distance from the production areas to market centers, facilities used, and the risks involved.

This section provides a comparison of the costs and returns and efficiency of the marketing operations of the PGs and traders for palay (Tables 3.7 and 3.11) and rice (Tables 3.8 and 3.12) in the four regions.

Volume Handled by PGs and Traders

Palay. Central Luzon traders handled very large volume of palay averaging 11,568 mt. The PG in this region handled only 1,115 mt

Table 3.7. Comparative marketing operations of PG and traders for palay by region, 1993-1994.

Item	Cagayan Valley		Central Luzon		Bicol		Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Number Reporting	4	4	1	15	1	5	5	43	16	64
Volume Handled (mt)	629	782	1115	1568	94	44	31	30	266	437
Selling Price (P/100)	575	580	557	512	613	560	530	519	536	514
Total Revenue (TR) ('000 P) a/	362	454	621	803	58	25	16	16	152	228
Buying Price (P/100 kg)	526	530	503	457	548	525	492	482	488	472
Marketing Margin (MM) b/	49	50	54	55	65	35	38	37	48	41
Marketing Cost (MC) (P/100kg)										
Transport	11	14		7	5	5	5	4	6	5
Labor	5	5	4	4	11	13	2	2	6	3
Drying	4	8	5	11	7	9	5	5	5	7
Storage	5	0							1.3	
Supplies and materials	2	2			1	4	13	13	5	9
Managers' fee/commission				9	16				5	2
License fee c/	2	1			0.4				0.6	0.06
Depreciation d/	1	2			8	2			3	0.16
Others			1	2					0.6	0.5
Total	32	34	10	32	48	33	25	24	29	26

Table 3.7. (Continued).

Item	Cagayan Valley		Central Luzon		Bicol		Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Total Cost e/	558	564	513	489	596	558	517	506	518	499
Net Profit (NP) f/	17	16	44	23	17	2	13	13	18	15
MC as % of MM	65	68	19	58	74	94	66	65	58	63
NP as % of MM	35	32	81	42	26	6	34	35	36	35

a/ Selling price x volume handled.
b/ Difference between selling price and buying price.
c/ Same regardless of volume of business, but was derived per 100 kg to be comparable with other costs.
d/ Used the straight lines method where equipment acquisition cost less salvage value was divided with the no. of years to last.
e/ Marketing cost plus buying price.
f/ Marketing margin less marketing cost.

(Table 3.7). In contrast, PGs in Bicol and Southern and Central Mindanao generally handled lower volumes.

Traders in Cagayan Valley also handled larger volume than PGs, but on a relatively small-scale basis, 782 mt and 629 mt, respectively. In Bicol, PGs handled comparatively larger volume than the trader, but much lower than those of Cagayan Valley and Central Luzon.

Rice. Rice traders in Central Luzon handled very large volumes of rice averaging 5,840 mt per trader (Table 3.8). No PG sold rice. These traders usually have big capital. The same observation holds true in Bicol where traders handled relatively larger volume than PGs. In Cagayan Valley, there was no sample trader involved in rice trading.

Buying Prices of PGs and Traders

Palay. The PG buying price of palay was higher than that of the traders by P16 per 100 kg on the average. Across regions, it was only in Cagayan Valley where the PGs paid a slightly lower price than traders, a difference of only P4 per 100 kg. However, a large part of the farmers produce was channeled to the PG (82%) and this was because PGs provided cash advances.

In Central Luzon, the buying price differential was quite large, about P46 per 100 kg. However, the bulk of the members' produce (78%) were channeled to traders probably because sample traders picked up the palay and provided cash advance. The availability of a large number of traders who operated in higher-level markets and offered relatively higher prices could also explain the lower market share of PGs compared with the traders.

In Bicol, the price differential averaged P23/100 kg. Here, traders were mostly located in the same area coverage of PG, mostly barangay-based, the lowest level market.

Meanwhile, Southern and Central Luzon exhibited an average price differential of P10/100 kg. Traders here were also numerous and operated mostly in the same business area of the PGs.

The buying price differentials are also presented in Table 3.9. The average buying price of the PGs was higher than that of the traders by P18/100 kg. As observed in Table 3.7, only in Cagayan Valley were the PGs received a lower buying price than traders.

Although small, the buying price differentials between PGs and traders are also reflected in the selling price differentials between the farmer-members and nonmembers. On the average, the former received P500/100 kg and the latter, P496/100 kg.

Table 3.8. Comparative marketing operations of PGs and traders for rice by region, 1993-1994.

Item	Cagayan Valley a/	Central Luzon b/	Bicol		Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Number Reporting	1	6	5	9	4	23	10	38
Volume Handled (MT)	137	5840	183	600	c/	c/	105	1064
Selling Price (P/100)	1220	978	1070	1225	1095	1082	1095	1099
Total Revenue (TR) ('000 P)	167	5711	196	735			115	1076
Buying Price (P/100 kg))	1084	751	844	854	871	863	879	843
Marketing Margin (MM)	136	227	226	371	224	219	216	256
Marketing Cost (MC) (P/100kg)								
Transport	19	6.5	5	3	16	13	11	10
Labor	7	14	11	13	27	28	17	22
Drying	12	6					1.2	0.95
Storage	9						0.9	
Supplies and materials	7	9	1	2	10	10	5.2	6.5
Managers' fee/commission	7		16				8.7	1.42
License fee	3		0.4	0.1			0.5	0.02
Depreciation	3		8	6			4.3	1.42
Milling	7	45	61	52	38	37	46	42
Others		1.75	1		0.1		0.54	0.28
Total	74	82	103	76	91	88	95	84

Table 3.8. (Continued).

Item	Cagayan Valley a/	Central Luzon b/	Bicol		Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Total Cost	1158	833	947	930	962	951	974	927
Net Profit (NP)	62	145	12	295	133	131	121	172
MC as % of MM	54	36	46	21	41	40	45	35
NP as % of MM	46	64	54	80	59	60	55	65

a/ No traders milling palay into rice.
b/ One PG only procured palay, while the rest did facilitating functions.
c/ No data available.

Table 3.9. Comparative buying prices of PGs and traders, and selling prices of farmer-members and nonmembers for palay in four regions, 1993.

	Cagayan Valley	Central Luzon	Bicol	Southern & Central Mindanao	Philippines
Buying Price (P)[a]					
PG	533	503	548	492	519
Trader	538	457	525	482	501
Selling Price[a]					
Member	535	489	486	492	500
Nonmember	535	477	471	502	496

[a] Average for the year.

Notes:
1. Selling price of member is not equal to the buying price of PG since members also sold to non-PG buyers. Likewise, nonmembers sold to nonrespondent-buyers.
2. Prices for Bicol are not directly comparable with those in Cagayan Valley, Central Luzon, and Southern and Central Mindanao. The intention was to show the relative levels of prices of PGs vis-a-vis traders and farmer-members and nonmembers.

Rice. The buying price of rice was expressed in palay equivalent. On the average, the buying price of PGs was higher than that of traders by about P36/100 kg (Table 3.8). This was true also in Southern and Central Mindanao, but not in Bicol. The price differential in the former averaged P10/100 kg and P8/100 kg in the latter.

Selling Prices of PGs and Traders

Palay. Table 3.7 also shows that PGs sold palay at a higher price (P536/100 kg) than traders (P514/100 kg). This was true only in three regions, but the price differentials were larger in Bicol and Central Luzon than in Southern and Central Mindanao, at P45-53/100 kg and P11/100 kg, respectively. In Bicol, this could be explained by the availability of drying facilities that allowed, them to redry their palay to improve its quality, and thus, get higher prices. Moreover, PGs had big storage facilities that enabled them to store their product, schedule their sales, and wait for better prices.

Table 3.10 presents the monthly selling prices. Only Southern and Central Mindanao showed a complete series, while in Bicol, only the PGs kept a record. Central Luzon PGs and traders had records only from March to July because after this period, there were no more stocks for

Table 3.10. Comparative monthly selling prices of PGs and traders for palay by region, 1993-1994.

Month	Cagayan Valley		Central Luzon		Bicol	Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	PG	Trader	PG	Trader
January					591	515	505		
February					479	511	497		
March					588	531	516		
April			740		584	534	543		
May			690	690	606	580	538		
June			701	674	698	533	504		
July			725	698	650	517	473		
August			750	755	793	491	478		
September					841	507	496		
October					719	519	509		
November					678	533	519		
December					600	524	512		
Average			721	704	652	525	508		

sale. For Southern and Central Mindanao, PGs registered a higher selling price than their trader counterpart.

Marketing Margins of PGs and Traders

The marketing margin is the difference between the selling price and the buying price. At the given cost, a higher margin means higher profit.

Palay. The margin derived by PGs for buying and selling palay average P48/100 kg which was P7 higher than that obtained by traders (Table 3.7). The selling prices received by the former were much higher than those of traders. This was true, particularly in Bicol and Southern and Central Mindanao. The former, however, received a margin almost two times bigger than that realized by traders. PGs in Southern and Central Mindanao received only a P1 price differential. On the other hand, PGs in Central Luzon and in Cagayan Valley realized a margin lower by P1/100 kg than traders.

It was in Bicol that the margin of PGs was much higher than that of traders (P65 versus P35), thus, pulling up the average for the four regions.

Rice. PGs on the average, realized lower marketing margins than traders, at P216 and P256/100 kg, respectively (Table 3.8). This was because their selling prices were much lower than those of traders. Similarly, in Southern andCentral Mindanao, the margin was much higher than traders also because of higher selling price and even if they bought at a higher price.

Across regions, margins were lowest in Cagayan Valley. PGs in Southern and Central Mindanao, however, realized higher margin than PGs in Bicol.

Comparative Marketing Efficiency of PGs and Traders

Palay. The cost of marketing incurred by PGs was higher than traders. On the average, this amounted only to P29/100 kg for the PGs and P20/100 kg for the traders (Table 3.11). Among the regions, Bicol PGs incurred the highest cost at P48/100 kg. However, in Cagayan Valley and Central Luzon, PGs incurred a lower cost than the traders. Moreover, the marketing cost was lowest because the major service performed was drying. On the other hand, PGs in Bicol had considerable expense on managers' fee and commission for the staff and depreciation.

For Cagayan Valley, the PGs' volume of business was lower than traders, but across regions, was much higher than those in Bicol and Southern and Central Mindanao. They incurred relatively lower cost,

Table 3.11. Comparative marketing efficiency of PGs and traders for palay in four regions, 1993-1994.

Measures of Marketing Efficiency	Cagayan Valley		Central Luzon		Bicol		Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Number Reporting	4	4	1	15	5	1	5	43	16	64
Operational Efficiency										
Marketing costs (P/100 kg)	32	34	10	32	48	33	25	24	29	26
Capacity utilization (%) a/	a/	b/	100c/	b/	89	95	54	86	72	91
Pricing Efficiency (P/100 kg)										
Buying prices	526	530	503	457	548	525	492	482	488	479
Selling prices	575	580	557	512	613	560	530	519	536	520
Margins	49	50	54	55	65	35	38	37	48	41
Financial Viability d/										
Profits ('000 P)	107	125	491	361	1557	87	4	4	136	96
Return on investment (%)	4	6	7	17	3	2	3	2	3	6

a/ Warehouse,vehicles, weighing scale, rice mill, drying area.
b/ Data not available.
c/ Determined only during peak periods of operation.
d/ Profit = Net profit x volume handled.

$$ROI = \frac{\text{(Net profit + interest expense on borrowed capital)}}{\text{Total investment}} \times 100$$

particularly in transport and drying relative to their trader counterpart.

For Southern and Central Mindanao, the high marketing cost incurred by PGs can be attributed to the higher transport cost compared with the traders.

To obtain the net profit, the marketing cost was deducted from the margin. Due to a much larger margin, PGs stillrealized a slightly higher profit than traders (P18/100 kg versus P15/100 kg) despite the higher marketing cost.

Except for Southern and Central Mindanao, the profit of the PGs was higher than that of the traders. For Cagayan Valley and Central Luzon, this was due to lower cost, for Bicol, to a larger margin. Between PGs and traders of Southern and Central Mindanao, profit was the same resulting mainly from larger margin, but higher marketing cost for PGs than traders.

Among PGs and traders, those in Central Luzon realized the highest net profit mainly due to lower marketing cost (however, they paid lower prices to farmers, next to those PGs in Southern and Central Mindanao). In view of this, their net profit was quite a large proportion of the margin (81%). Since profits were smaller for Southern and Central Mindanao, Cagayan Valley and Bicol, they comprised a smaller proportion of margin, 34, 35, and 26 percent, respectively. The lower profit of Southern and Central Mindanao PGs resulted from their high cost relative to their margins.

Annual profits for PGs averaged P136,000, with the highest in Bicol at P1,557,000 and the lowest in Southern and Central Mindanao at P4,000. Central Luzon PGs realized P491,000 which lower than that of Bicol even if their unit profit was higher and volume transacted was bigger. The profit figure referred only to one PG. In palay trading, the profits of PGs were higher than traders, averaging P136,000, mainly due to substantial profits realized by PGs in Bicol.

The village-based traders in Bicol and Southern and Central Mindanao realized very low profits. Across regions,traders in Cagayan Valley obtained higher profits than PGs, while the same profit levels were obtained by PGs and traders in Southern and Central Mindanao. In Central Luzon, profits of PGs was higher than traders.

The return on investment (ROI) is a measure of return to total assets or alternatively the return to operating capital and fixed investment. Results showed that, on the average, ROIs are not high, not even approximating the 8 percent opportunity cost of capital from time deposit and a risk factor of 7 percent. Traders generally showed higher ROIs than PGs. However, variations were observed such that Bicol and Central Luzon traders showed the highest ROI which was much higher than the assumed 15 percent level, and this was due to higher margin.

Results suggest that profit rates were quite low, but could have been higher if marketing cost was lower and if selling price was higher and buying price lower. The latter, however, would mean that farmers would receive even a lower price. In terms of selling prices, it would seem that this can be increased if PGs could increase volume for sale to take advantage of bulk sales. Better quality palay could also be sold. Adequate storage, drying, and transport facilities must also be ensured so that the PGs will have greater bargaining power with their buyers.

Rice. Table 3.12 shows the marketing efficiency of PGs and traders in Bicol and Southern and Central Mindanao in buying palay and selling rice. There was no private trader ofrice among the samples in Cagayan Valley and the PG in Central Luzon only sold palay. Assuming a 60 percent milling recovery, the buying prices of rice were expressed in palay equivalent. On the average, PGs were operationally less efficient than the traders because of higher marketing cost, especially in milling and transporting. PGs marketing facilities were also more underutilized than those of the traders.

On the average, PGs were economically less efficient than traders. While the former sold at a lower price they bought at a higher price than the latter, resulting in lower margin. However, the margin derived by the PGs out of processing palay into rice was almost five times greater than selling in palay into rice was almost five times greater than selling in palay form. Milling cost of PGs was greater than that of traders, constituting 48 percent of the total marketing cost. Bicol showed a higher milling cost of 59 percent of total marketing cost.

PGs obtained a positive profit, but lower than that of traders. In Bicol, PGs were less viable than the traders. On the average, ROI in rice trading was generally higher compared with ROI coming from trading palay. ROI of PGs, while quite lower than traders, approximated the assumed 15 percent opportunity cost plus risk factor of capital. In particular, the PGs in Bicol had higher return than the traders on their marketing investment for rice and even for palay.

Marketing Constraints and Coping Mechanisms of PGs

The major problems encountered by PGs were both external and internal in nature and vary by region (Table 3.13). The external problems included low and unstable palay price, while internal problems pertained to lack of capital for procurement operations, inadequate postharvest facilities, strict quality requirement, and limited NFA procurement. Minor problems were delayed payment of delivered products, poor farm-to-market road, and inteference of price fixers. Bicol PGs were bothered by the low and unstable palay prices, as well as the inadequacy of

Table 3.12. Comparative marketing efficiency of PGs and traders for rice in four regions, 1993-1994.

Measures of Marketing Efficiency	Cagayan Valley	Central Luzon	Bicol		Southern & Central Mindanao		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Number Reporting	1	6	5	9	4	23	10	38
Operational Efficiency								
Marketing costs (P/100 kg)	74	82	103	76	91	88	95	84
Capacity utilization (%)			89	95	54	85	72	90
Pricing Efficiency (P/100 kg)								
Buying prices	1084	751	844	854	871	863	879	843
Selling prices	1220	978	1070	1225	1095	1082	1095	1099
Margins	136	227	226	371	224	219	216	256
Financial Viability								
Profits ('000 P)	85	8473	225	1770			121	1759
Return on investment (%)	7	17	19.6	15.4	14.7	13.7	15	15.37

Table 3.13. Marketing constraints and coping mechanisms of PGs in four regions, 1993-1994.

Marketing Constraints/Coping Mechanisms	Cagayan Valley (n=5)	Central Luzon (n=5)	Bicol (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=20)
			Number Reporting a/		
1. Lack of capital for palay procurement/high collectibles due to low repayment	4		4	4	12
- employed collectors during harvest season to ensure repayment	3			1	4
- sold immediately to NFA the payment in kind of farmers and deferred payment of loans to LBP and used as working capital	1				1
- restructured loans of those who suffered crop failure				2	2
- accepted installment payment for loans			1	1	2
- PG borrowed from traders			1		1
- availed loan from LBP and DAR			1		2
- Continuous education on the importance of paying loans and to improve financial management	1			1	2
- chairman paid the loan first			1		1
- delinquent borrowers not allowed to apply for another loan			1		1

Table 3.13. (Continued).

Marketing Constraints/Coping Mechanisms	Cagayan Valley (n=5)	Central Luzon (n=5)	Bicol (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=20)
			Number Reporting a/		
2. Inadequate postharvest/marketing facilities	4		4	2	10
- availed of NFA mechanical dryer to avoid product deterioration during wet season	1				1
- immediate disposal of palay to traders who had the facilities for drying	1				1
- availed loan from LBP to purchase postharvest facilities			2		2
- encouraged farmers to increase share on capital	1				1
- applied loan from other agencies to buy facilities	1				1
- rented rice mill and warehouse			2	1	3
- PG operated as agent				1	1
3. Low and unstable palay price	1	1	5	2	9
- stored product and waited for a better price		1	1	2	4
- canvassed other traders to know who offered highest price/strict monitoring of price			1		1
- followed prevailing market price	1		3		4

Table 3.13. (Continued).

Marketing Constraints/Coping Mechanisms	Cagayan Valley (n=5)	Central Luzon (n=5)	Bicol (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=20)
			Number Reporting a/		
4. Strict quality requirement of stock/poor quality control		3	1	3	7
- used reliable tester for determining moisture content		1		1	2
- practiced proper drying to pass NFA standard		1			1
- redrying/cleaning the palay			1		1
- imposed reduction of 3-5 kg/bag on poor quality palay sold/paid to PG				2	2
- adhered to strict grading of product to pass NFA standard		1			1
5. Limited procurement by NFA		3			3
- sold to private traders		3			3
6. Delayed payment of delivered product to wholesale	1				1
- imposed cash on delivery	1				1
- selected those buyers with high credibility	1				1

Table 3.13. (Continued).

Marketing Constraints/Coping Mechanisms	Cagayan Valley (n=5)	Central Luzon (n=5)	Bicol (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=20)
			Number Reporting a/		
7. Poor farm-to-market road			1		1
- asked help to LGU to improve road and proposal considered in plans				1	1
8. Interference of price fixers				1	1
- setup communication facilities to closely monitor prices and keep buyers well informed				1	1

a/ Exceeded no. of respondents due to multiple answers.

postharvest facilities. Central Luzon PGs, on the other hand, complained of the strict quality requirement and limited procurement of the NFA. Southern and Central Mindanao PGs considered lack of capital for palay procurement and strict quality requirement of stock as their major marketing problem. Cagayan Valley PGs also experienced shortage in procurement funds in addition to inadequate postharvest facilities.

PGs tried to cope with the abovementioned problems by instituting some short-term measures. The problem of inadequate procurement fund was partly attributed to lack of working capital and low repayment rate. Hence, most PGs dealt with this by sending collectors during harvesting period or undertaking closer monitoring activity during this period to improve loan repayment of their members. This was practiced by most PGs in the three regions, i.e., except in Central Luzon. Some PGs tried to restructure the loans of the farmers as in the case of Southern and Central Mindanao; they accepted installment payment for loans as in Bicol and Southern and Central Mindanao; borrowed from LBP and DAR, coupled with educating farmers on the importance of paying loans, and sound financial management as in Bicol. Other PGs deferred repayment of loans to LBP and used farmers' payment as working capital as in Cagayan Valley; borrowed from traders and nonextension of credit to delinquent borrowers as in Bicol; and the chairman assuming tentative responsibility for loan repayment as in Cagayan Valley and Southern and Central Mindanao.

The inadequacy of postharvest and marketing facilities in Bicol and Southern and Central Mindanao was met by some PGs by renting a rice mill and warehouse. Other PGs in Bicol borrowed from the LBP to purchase these facilities, while the PGs in Cagayan Valley utilized the mechanical dryer of the NFA, sold palay immediately to traders who had the drying facilities, increased the capital share of the members, and also applied for financial support from nongovernment agencies. A PG in Southern and Central Mindanao assumed the work of an agent to augment its procurement funds.

Since prices were generally beyond the control of the PGs, most of them stored the palay and waited for a better price or acted as price takers as low and unstable palay prices occurred. This was done by most PGs in Bicol and Southern and Central Mindanao.

The PG in Bicol tried to monitor prices of different outlets. For a better-quality palay, particularly to conform with the moisture content requirement, a moisture tester was used in Bicol and Southern and Central Mindanao. The PG in Central Luzon practiced proper cleaning, drying, and grading of palay to pass the NFA standard. On the other hand, PGs in Southern and Central Mindanao imposed automatic deduction of 3-5 kg/bag to discourage farmers from selling poor-quality palay.

In cases of delayed payment, the PG in Cagayan Valley imposed cash on delivery system and, at the same time, became selective of the retailers/wholesalers based on good reputation and credibility.

In Central Luzon, sample PGs were ill-equipped and lack capital to expand their operation. Most PGs did not have facilities for transport and storage and even for solar drying. To cope with these constraints, PGs imposed a policy of procuring only sun-dried palay, shortening period of storage, and arranging traders to pick up palay at selected assembly points. Price monitoring and dissemination among primary PGs were inefficient. No communication facilities existed to connect them to the market as basis of their pricing. Moreover, they did not have good records of previous prices for forecasting and pricing decisions.

To solve the problem on poor farm-to-market road, the PG in Bicol coordinated with the concerned LGU to make roads a priority concern. In Southern and Central Mindanao, the PG tried to minimize the operations of price fixers by closer monitoring of the prices.

Support Services to PGs

Aside from the PGs' own initiatives in solving their problems, they also received support from various government agencies and sometimes from nongovernment agencies (Table 3.14). The support came mainly in the form of financial assistance from the LBP for the production operations. In 1992, LBP provided about 85 percent of the Central Luzon PGs' total capitalization ranging from P393 thousand to P11 million at a low interest rate of 12 percent per annum. Marketing assistance was in terms of price monitoring and price incentive that can address the problem on low and unstable palay prices, particularly evident in Southern and Central Mindanao and Cagayan Valley. Generally, however, support services, particularly from the government, were mainly directed towards production activities and not specifically to marketing.

Capability enhancement support was also extended to most PGs by the LBP, DA, and CDA. This included training programs on rice production technologies, premembership seminar, and cooperative management, particularly in Southern and Central Mindanao. While there were efforts to address the problem of inadequate postharvest facilities, particularly in Cagayan Valley and Bicol, they were very limited. No support was evident to address the problems of lack of procurement funds.

The DA Bureau of Agricultural Statistics (BAS) provided pricing information and other marketing assistance to a PG in Cagayan Valley aside from those extended by the NFA to all PGs. In Central Luzon, NFA

Table 3.14. Support services provided by different agencies in four regions, 1993-1994.

Services Provided	Name of Agency	Cagayan Valley (n=5)	Central Luzon (n=5)	Bicol (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=20)
		Number Reporting				
1. Financial assistance						
a. Loans	LBP	5	5	4	5	19
	DTI			1		1
	DAR			2		2
	NFA		2			2
	Country Bankers		1			1
	Shell Chemicals		1			1
	Bicol Cooperative Center			1		1
b. Grants	USAID			1		1
	West German Protestant Central Agency for Devt. Aid			1		1
2. Trainings/Seminars/ Technical Assistance	LBP	5	1			6
	PCIC			1		1
	DA	2	2	2	5	11
	DTI	2				2
	CDA	5		3	5	13
	DAR			2		2
	CBP			2		2
	CIBA-GEIGY		1		1	2
	BBDF/PICPA			1		1
	Bicol Institute for Small Business			1		1

Table 3.14. (Continued).

Services Provided	Name of Agency	Cagayan Valley (n=5)	Central Luzon (n=5)	Bicol (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=20)
		Number Reporting				
3. Marketing assistance	NFA	5	2	1	3	11
	DTI1				1	
	NGO		1			1
	BAS	1				1
4. Provided production and postharvest facilities	LBP			1		1
	DAR	1				1
	NIA			1		1
	DA		1		1	
	NFA		1			1
5. Crop/Fire insurance	NFA		1			1
6. Farmers' eligibility to avail credit	PCIC		2			2
7. Technology on soap making	DTI	1			1	
8. Infrastructure/Accessible road network	LGU				1	1
9. Swine dispersal	DA	1			1	
10. Livelihood project	Bigay Puso Foundation			1		1

provided incentives to the PGs equivalent to P5 to P10 centavos per kilo of palay sold to NFA. This amount was allowed to accumulate which could be used to purchase postharvest facilities. PGs received an average of P25 thousand Cooperative Incentive Fee.

Other support services from government agencies such as DA, DAR, and PCIC included direct technical assistance, trainings, and crop insurance. Support services from NGOs and private agencies included marketing assistance, provision of farm and office supplies, and trainings/ seminars, particularly on the utilization of farm inputs such as chemicals.

Benefits to Farmer-Members

PG-generated benefits

Small PGs were established to help farmers. Among the benefits that farmers receive from PGs are financial assistance, marketing assistance for both outputs and inputs, technical assistance through trainings or seminars, and other forms of assistance such as mortuary aid and insurance.

The benefits are quantified in Table 3.15. Benefits to farmer-members were those attributable to PG membership and include patronage refund and dividends, and output and input price and interest rate differentials. The latter were determined relative to what members would have to receive or pay had transactions been effected with an alternative entity and not with the PG, hence, the opportunity cost.

The total benefits that accrued to members were estimated at P295,211 per PG or P2,622 per member. These included those obtained from the other activities of the PGs which in the case of Central Luzon was considerably large. The region also provided the highest benefit for its members, while Cagayan Valley gave the least. A substantial source of benefits accruing to members in Central Luzon is the interest rate differential. The PGs as conduit of government financial assistance, particularly from the LBP provide production loans with an interest rate lower than alternative credit sources. Input price differential was minimal indicating almost the same input prices offered by the cooperative and other input dealers. Patronage refunds and dividends remained undistributed to farmers for most PGs. In the case of Central Luzon, nondistribution was due to the members' loan defaults and PGs financial difficulties. Others reported that such funds were being used to form part of their capital buildup.

Generally, benefits derived by farmers from rice marketing are quite small. But with greater patronage through farmers' selling their produce to the PGs and availment of their other services will give members more benefits in the long run.

Table 3.15. Benefits (in P) to farmer-members from PG in four regions, 1993-1994.

Item	Cagayan Valley		Central Luzon		Bicol		Southern & Central Mindanao		Philippines	
	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member
					Pesos					
Dividend	2650	11			4657	170	1206	60	2128	60
Patronage Refund	4716	15	41292	378	9695	354	1206	60	14522	202
Output Price Differential a/	2160	114	116928	891	2293	84	20	1	30350	207
Input Price Differential b/			6016	46	816	30			1708	19
Interest Rate Differential c/	5179	30	635490	4844	1075	39	60	3	160451	1299
Other Income d/	11440	64	297477	2267	35289	1288			86052	905
Total Benefits	26105	6	1E+06	8246	53825	1964	2493	124	295211	262

a/ OPG - OPT x Qc where : OPG = PG's buying price of palay.
OPT = Trader's buying price of palay.
Qc = Volume of palay sold by farmer-members.

b/ IPG - IPT x Qi where: IPG = PG's selling price of input.
IPT = Trader's selling price of input.
Qi = Quantity of inputs purchased by farmer-members.

c/ RPG - RT x M where: RPG = Interest rate charged by PG on loans.
RT = Interest rate charged by other sources.
M = Amount of loans incurred by farmer-members.

d/ Income from interest on loans, service fee, operations for milled rice, consumer store.

Farmers' income

The effects of some these services on farmer members' income from palay production are presented in Table 3.16. On the average, members had higher income from rice than nonmembers, at P14,270/ha and P12,920/ha, respectively. Across regions among the farmer-members, Central Luzon showed the highest and Bicol the lowest, at P29,641/ha and P4,876/ha, respectively. The same trend was true even among nonmemberswherein Central Luzon registered the highest yield and Bicol the lowest, at P29,060/ha and P2,449/ha, respectively. In Central Luzon, the marked difference in area operated (1.73 ha and 0.85 ha for members and nonmembers, respectively) coupled with a higher price of palay for one PG largely explained the difference. In Cagayan Valley, the low per hectare income of members of three sample PGs may be attributed to the low buying price offered by the PGs than that of the traders. Traders purchased palay of nonmembers at a higher price.

Results are not conclusive though, because no statistical analysis has been made to prove that membership/nonmembership in cooperative is the primary causal factor. However, membership offers distinct advantages since financial assistance and technical services, particularly from the government are mostly made available to organized groups. The cooperative serves as a ready source of the input needs to the members, as well as their marketing arm.

Nonquantified benefits

Table 3.17 presents indications of extent of membership support to PG activities. Their participation in meetings, even if not on a sustained basis, showed potentials of PGs in enabling farmers to air their needs and problems and interest with other producers. Trainings and seminars given to members and officers, though availed only by a few, also offered opportunities for improving the social and economic well-being of members. And this can be bolstered by greater support on continuous cooperative education.

Not all members were satisfied with the services provided by PGs (Table 3.18). However, some expressed concern on the importance of PGs' and cited their ability to offer higher price and regular buyer/market and financial responsibility as motivating forces for continuing to patronize PG activities and services. Apparently, the extension of financial assistance, the provision of trainings, and the access to marketing facilities were the main sources of satisfaction among members.

Table 3.16. Comparison of net income from rice production by farmer-members and nonmembers in four region, 1993-1994.

Item	Cagayan Valley	Central Luzon	Bicol	Southern & Central Mindanao	Philippines
			Pesos per Cropping		
Members					
Per farm	19377	72621	6710	24106	30693.5
Per hectare	12437	29641	4876	10127	14270.25
Per 100 kg	3.06	a/	1.36	1.01	1.81 b/
Nonmembers					
Per farm	18479	24737	3052	15535	964.75
Per hectare	12879	29060	2499	7294	12920.5
Per 100 kg	3.24	a/	0.92	0.73	1.63 b/

a/ No data available.
b/ Average for three regions only.

Table 3.17. PG activities by farmer-members in three regions, 1993-1994.

Item	Cagayan Valley	Bicol	Southern & Central Mindanao	Philippines a/
Number Reporting	150	137	100	387
			Percent Reporting	
Activities				
Meetings				
General assembly				
once	86	69	96	83
none	14	31	4	17
Monthly meetings				
12 x /year	48	15	0	24
11 x /year	12	12	0	9
below 10 /year	21	23	100	42
none	19	50	0	25
Trainings/Seminars				
3 x /year	2	11	8	7
2 x /year	4	17	46	19
Once a year	11	27	46	26
None	83	45	0	48

a/ Data not available for Central Luzon.

Table 3.18. Reasons for selling palay to PG and number of farmers who expressed satisfaction in PGs' services in three regions, 1993-1994.

Item	Cagayan Valley	Bicol	Southern & Central Mindanao	Philippines a/
Number Reporting	150	137	100	387
			Percent Reporting b/	
Reasons for Selling to PG				
Offer better price	53	15	28	33
Regular buyer	66			26
With credit-marketing tieup	55	11		25
A way of patronizing PG			81	21
Convenient/Easy to deal with	35	4		15
Responsibility as member		21		7
Honesty of the PG	10			4
Support for devt. of the PG		9		3
Nearest outlet	2	7		3
Convinced by friend/relative	3			1
With benefits (patronage refund, dividends)		6		2
Members Satisfied in PG Services				
Financial assistance	89		62	50
Procurement/Buying product	75			29
Existence of good officer-member relationship	67			26
Source of price information	60			23
Provide training		58		21
Provide transport facilities			68	18
Provide irrigation services		7		3
Availability of inputs		5		2

a/ No data available for Central Luzon.
b/ Exceeded 100 percent due to multiple response.
c/ The rest were dissatisfied.

Summary and Conclusions

The participation of small PGs in rice marketing as viable approach to address the perennial problems of rice insufficiency and poverty among small farmers has not been well documented. Hence, this study attempted to determine channels the advantages PGs may have over alternative channels in rice marketing in four major rice-producing regions in the Philippines. The effects of existing support services,

related infrastructure and policies on PGs were also identified. Issues on whether the formation of PGs can induce marketing efficiency, as well as improve social and economic well-being of small farmer-members were also addressed.

The areas covered in this study were Region II (Cagayan Valley), Region III (Central Luzon), Region V (Bicol), and Regions XI and XII (Southern and Central Mindanao). Twenty PGs, 78 private traders, 539 farmer-members, and 307 farmer-nonmembers comprised the sample respondents.

The marketing of rice in the four regions under study was dominated by private traders or intermediaries. Although NFA also actively participates in the rice marketing in Central Luzon and the other rice-producing regions in the country, it has not been very successful in defending the support prices for palay as average farm gate prices have consistently been below the NFA support price from 1980 onwards.

PGs have started to become important participants in palay marketing, either as outlets or as direct links to NFA and other buyers for members' produce.

PGs provided to members 14 different marketing services. The most common services were procurement, processing, storage, transport, grading, packaging, drying, retailing, provision of market information, marketing training, and financing. However, among these services, only financing was performed by all PGs in all regions. The functions least performed were market and product promotion, market linkaging, and wholesaling. PGs generally picked up palay from the farmer's place just like traders, and mostly paid cash in advance. Traders, however, paid cash upon delivery. Both PGs and traders delivered their products to buyers and received cash advance/cash on delivery and cash on spot, respectively.

Farmer-members did not sell exclusively to PGs. But the bulk of the members' produce were absorbed by the PGs, except in Central Luzon; while in Southern and Central Mindanao, all members' produce were absorbed by PGs. But still, private traders were the dominant figures in palay trading in the whole marketing chain, particularly for nonmembers.

PGs realized higher net income from palay trading than traders because of their ability to sell at a higher price, hence, higher margin. This was particularly true in Central Luzon, Bicol, and Southern and Central Mindanao. The same profit rates were observed in Southern and Central Mindanao. However, operationally, PGs were less efficient than traders because of high marketing cost ranging from 19 to 74 percent or an average of 58 percent of the margin. The bulk of the PGs' cost was on transport, labor, and drying. The PGs also had a lower capacity utilization of facilities. Hence, in general, net profit of PGs as a

proportion of marketing margin was only 1 percent higher than that of traders.

Additional service performed, particularly milling, provided more value added. Both PGs and traders realized greater net profits in rice than palay trading. But PGs realized lower net profit than traders because of lower selling price, but higher buying price. Volumes of palay and rice handled by the PGs were smaller than those of traders. Operationally, PGs were less efficient than traders because of higher marketing cost which comprised, on the average, 45 percent of the margin. The major item of cost of the PGs was on milling. They also had higher expenses than traders on transport, drying, and manager's fee/commission. PGs also had lower capacity utilization of facilities than traders.

ROI from rice trading for PGs was higher than in palay trading. But PGs had higher and almost the same ROI than traders in palay and rice trading, respectively.

Marketing of palay/rice by PGs was confronted with several problems. PGs were able to cope with them through short-term measures. Major problems were lack of capital for procurement, inadequate postharvest facilities, low and unstable palay price, strict quality requirement/poor quality product, and limited NFA procurement. Other problems were delayed payment of delivered products, poor farm-to-market roads, and interference of price fixers.

Government support was provided to the different PGs to help alleviate the different problems confronting them. Several agencies, particularly the LBP, NFA, CDA, DA, and the Philippine Crop Insurance Corporation (PCIC) among others, provided support services such as credit assistance with low interest rate, market assistance in the form of price information and incentives, trainings, provision of production and postharvest facilities, and crop insurance which, however, were still inadequate or ineffective since the farmers were still faced with a number of marketing problems which needed to be addressed.

Small PGs had provided benefits to their members who received financial assistance, marketing assistance for both inputs and outputs, technical assistance or trainings/ seminars. The value of these benefits varied among regions as influenced by the PGs' volume of operation and capital standing. The bulk of the benefits were from interest rate differential. Central Luzon showed the highest per PG and per member benefits, while those in Cagayan Valley the lowest per member and Southern and Central Mindanao the lowest per PG.

Marked differences were noted among income from rice production of members and nonmembers. Farmer-members generally had higher net income than nonmembers, but cannot be attributed solely to membership. Other measures have to be explored.

Farmer-members had positive attitude toward PGs and optimistic as to their potential for success. The benefits/ services provided, particularly financing were the sources of satisfaction among the members.

Results of the study highlighted that PGs can be efficient participants in palay/rice marketing. Although the present market share of PGs is still small relative to the share of the private traders, of given more support and proper guidance, the potential for increasing their market share and improving marketing performance is great.

The PGs desire to provide members most, if not all of the marketing services, particularly, procurement, processing/ milling, and distribution would add value to the farmers' produce and could provide integrated linkages. However, for PGs to move into value added, it would require them more capital to invest on postharvest/marketing facilities and trainings. And for the cooperatives to expand the current operations and provide more services, profitability level has to be maintained, or increased. These can only be achieved by developing them as marketing enterprises.

Recommendations

Based from the foregoing discussions, the rice PGs have shown their potential as an enterpriser. They serve some social functions and are conduits of government and nongovernment support services, and have considerable potential in serving as the link and ultimate network for the flow of resources needed to bring about the desired development. Hence, the following are recommended to address their problems and develop them as marketing enterprises:

1. CDA and other concerned agencies must provide training on business management for cooperative officials.
2. LBP must provide more capital for procurement and investment for postproduction activities.
3. PGs must pursue processing and marketing to achieve more value added and greater profit.
4. DA and CDA should strengthen current activities by promoting geographical extension of activities among various cooperatives.
5. PGs should forge linkages with institutional buyers and consumer cooperatives to eliminate unnecessary handling, thereby increasing the profit margin.
6. Concerned agencies should strengthen current efforts of cooperative education to promote greater participation in cooperative activities among members.

7. There should be close coordination among CDA, LBP, DA, and NFA in providing the basic services to strengthen cooperatives in the country.
8. SCUs and LGUs through the Municipal Science and Technology Advisory Program (MSTAP) of the Department of Science and Technology (DOST) should help to complement and sustain the support activities of the CDA, LBP, DA, and NFA, particularly on capability enhancement programs for cooperatives.

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Chapter 4

Marketing of Corn by Small Producer Groups in Selected Regions of the Philippines

Alberto R. Domingo, Isabelita M. Pabuayon, and Lydia P. Oliva

Introduction

Economic Importance

In the Philippines, corn ranks second to rice as a cereal commodity. White corn acts as a buffer, especially during periods of rice shortage. Yellow corn, on the other hand, serves as a main component in the formulation of poultry and livestock feeds. The industrial utilization of corn had increased from 1,369 thousand mt in 1980 to 2,820 thousand mt in 1989 (CRC 1992). From the total industrial utilization, 84 percent goes to food products and 16 percent to nonfood products. In 1989, the share of corn used for feeds and seeds in proportion to the total corn production amounted to 33.6 percent and 2.10 percent, respectively.

In 1990, the total area harvested for corn in the Philippines was 3.82 million ha. Total production during the year amounted to 4.85 million mt with an average yield of 1.27 mt/ha.

For the period 1980-1990, Southern Mindanao ranked first in terms of land area planted to corn, but ranked second in total production and yield (Fig. 4.1). Central Mindanao ranked second in terms of land area planted to corn, but ranked first in total annual corn production and yield. Cagayan Valley ranked fourth in land area harvested to corn, third in total production and yield.

While a remarkable production level for corn was attained in the past decade, there had been insignificant improvements in the living conditions of corn farmers. Most corn farmers remain below the poverty line despite breakthroughs in corn production technology. Corn farmers complain

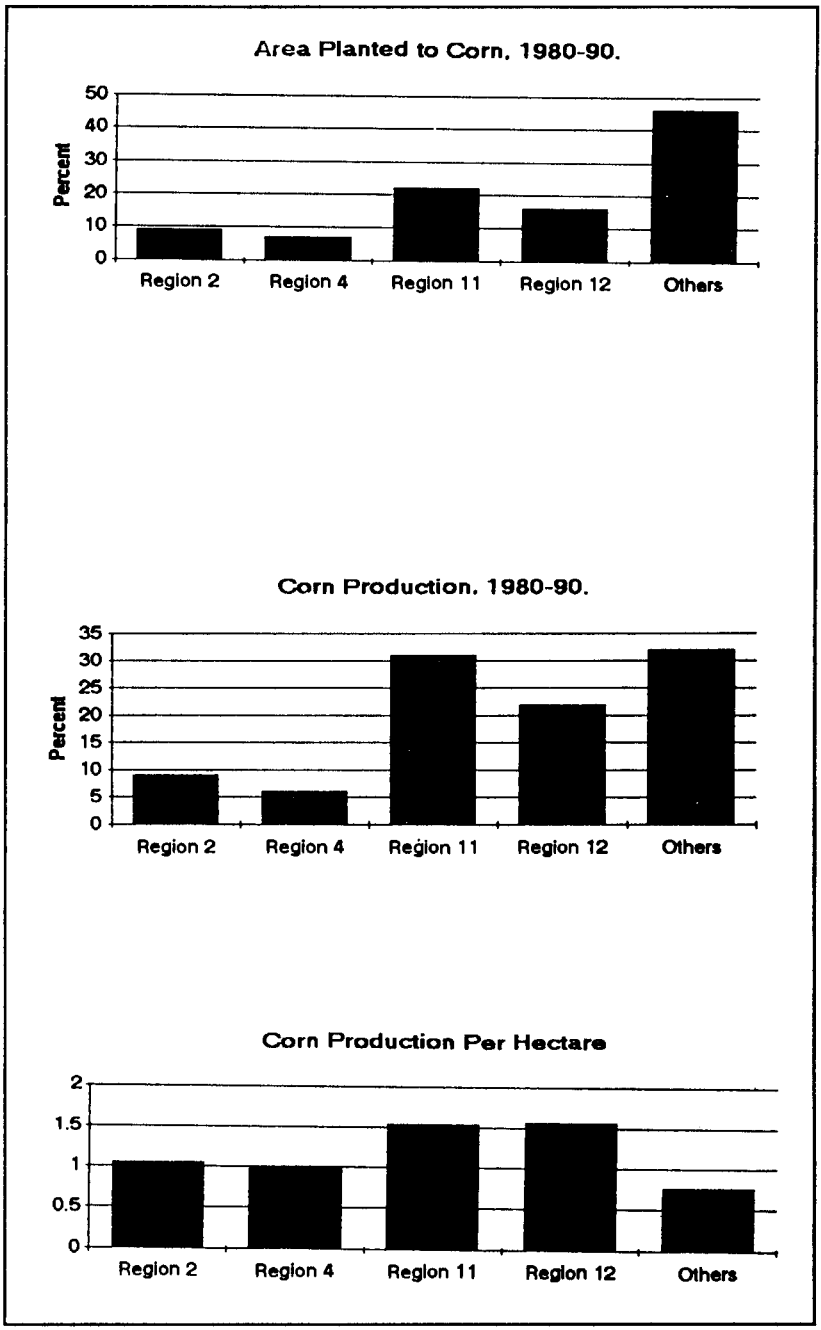

Fig. 4.1. Area planted to corn, total production, and production per hectare, by region, 1980-1990.

of low and unfavorable prices, of fluctuating prices, of exploitative relationship with traders and middlemen, and in general of an inefficient marketing system. In view of such problem, the establishment of producer groups (PGs) which will function as the marketing arm of farmer-members is seen as a strategy to minimize the defects of the agricultural marketing system, enable corn farmers to avail themselves of better prices, and improve their potentials for increasing bargaining power and finding better outlets for their produce. In so doing, farmers may be able to increase their income.

The marketing efficiency of PGs, however, has not been documented and analyzed. There is a need to determine and assess the implications of these marketing organizations on the economic well-being of farmers. The impact of policies and programs, support services, and physical infrastructure on the performance and sustainability of these groups must, likewise, be studied in depth.

Objectives

This paper presents the results of three studies conducted in four corn-producing regions of the country, namely: Region II (Cagayan Valley), Region IV (Southern Tagalog), Region XI (Southern Mindanao), and Region XII (Central Mindanao).

The objectives of the study are to:

1. provide an overview of the corn production-marketing system;
2. determine and analyze various marketing services performed by small PGs;
3. evaluate and compare the marketing efficiency of small PGs with alternative marketing channels/institutions (traders);
4. identify and determine the effects of existing support services, other related infrastructure, and policies on small PGs;
5. analyze the marketing constraints/problems of small PGs and their coping mechanisms;
6. evaluate the impact of small PGs on the social and economic well-being of farmers; and
7. recommend policy agenda for improving the overall performance of small PGs.

Methodology

Data Collection

Lists of PGs/marketing associations involved in corn marketing were obtained from various sources which include the Land Bank of the

Philippines (LBP), Cooperative Development Authority (CDA), Department of Trade and Industry (DTI), Department of Environment and Natural Resources (DENR), and local government units (LGUs), among others. From these lists, corn marketing PGs were selected.

Both primary and secondary data were used in the study. Primary data were gathered through personal interviews of PGs involved in the marketing of corn, farmer-members and nonmembers, and corn traders using three sets of pretested questionnaires. Table 4.1 presents the breakdown of sample respondents. Thus, 14 PGs were studied, 305 farmer-members, 186 farmer-nonmembers, and 65 traders.

Secondary information were gathered to provide an overview of the production-marketing system, as well as to determine and analyze the historical performance of small PGs and traders in corn marketing.

Analytical Techniques

PGs were described with respect to:

1. basic characteristics;
2. marketing activities;
3. support services availed of; and
4. problems/constraints faced and coping mechanisms.

In assessing marketing efficiency, the PG marketing operations were compared with those of traders. Marketing efficiency was determined by analyzing:

1. marketing/price margins;
2. marketing services;
3. marketing costs; and
4. net income.

The impact of membership in the cooperative was analyzed by accounting for:

1. the potential benefits that would accrue to farmer-members as per cooperative policies (e.g., maintenance of reserve, educational and building funds, and provision of patronage refunds);
2. gain/loss of members due to price differential of corn (milled/unmilled) of the cooperative and the trader; and
3. gain/loss of members due to interest rate differential for loans accessed through the cooperative and not through an alternative source.

Table 4.1. Breakdown of sample respondents by region.

Particulars	Cagayan Valley	Southern Tagalog	Southern & Central Mindanao	Philippines
No. of PGs	4	5	5	14
No. of Farmer-Members	105	101	100	306
No. of Farmer-Nonmembers	86	50	50	186
No. of Traders	7	8	50	65

Farm income of members and nonmembers were also compared. Nonquantifiable benefits were determined descriptively based on farmers' attitudes, perceptions, and degree of satisfaction on the PG services.

Empirical Findings

Description of PGs

The basic information about the PGs under study are shown in Table 4.2. All the corn PGs studied are multipurpose cooperatives. Four of them were established before 1980 and the rest between 1981 and 1993. All these PGs are registered with the CDA. In addition to their CDA registration, some PGs are registered with the National Food Authority (NFA), Securities and Exchange Commission (SEC), DTI, and the Philippine Coconut Authority (PCA), among others.

All PGs have grown in terms of membership and capitalization. They have also posted positive net incomes. Loans from banks, especially from the LBP contributed to the increase in capitalization.

Cagayan Valley and Southern Tagalog PGs cater to both members and nonmembers, whereas in Central and Southern Mindanao, PGs serve exclusively their members.

Community Profile of the PG Covered Areas

A profile of the PG areas is shown in Table 4.3. An average of 35 PGs are operating in the municipalities where they are located. In the municipalities in Southern Tagalog where the PGs studied are located, corn is minor crop, whereas in PG areas in Cagayan Valley and Central/Southern Mindanao, corn is the major crop.

Table 4.2. Characteristics of sample PGs by region.

Particulars	Cagayan Valley	Southern Tagalog	Southern & Central Mindanao	Philippines
Nature/Function (No.)				
Multipurpose	4	5	5	14
Year Established (No.)				
1969-1980		1	2	3
1980-1993	4	4	3	11
Capitalization (P'000)				
Initial	23	198	n.a.	120
Current	1,623	7,930	1,119	3,696
Number of Members				
Initial	50	33	n.a.	41
Current	199	251	162	204
Service Coverage (No.)				
Members only			5	5
Members and nonmembers	4	5		9
Registration (No.)				
CDA	4	5	5	14
SEC		2		2
PCA		2		2
NFA		3		3
DTI		1		1
Annual Income (P)	58,000	1,381	230	17,147

Table 4.3. Profile of sample municipalities by region.

Particulars	Cagayan Valley	Southern Tagalog	Southern & Central Mindanao	Philippines
No. of Municipalities Covered	4	74	5	13
No. of Traders per Sample Municipality	24	8	16	48
No. of PGs per Sample Municipality	55	24	22	101
No. of Corn Farmers	4359	24775a/	543	2239b/
Volume of Corn Production (mt)	43590	2813	2715	14429

a/ Total number of farmers, number of corn farmers could not be determined.
b/ Average for two regions only.

PGs in Cagayan Valley

PGs studied in Cagayan Valley are located in the provinces of Cagayan, Isabela, Nueva Vizcaya, and Quirino. One PG per province was selected, except for Isabela where two PGs were considered.

PG1 is located in Baua, 16 km from Gonzaga town proper in Cagayan. It serves three barangays of Gonzaga. The PG handles palay (rough rice) and corn, but the latter takes the great bulk. The PG covers a total area of 195 ha, 155 ha of which is planted to corn, 27.75 ha to palay, and 12.25 ha to other crops. The usual market outlets of farmers in the area are PG1 and four traders. These traders are based in the barangay. Aside from PG1, there is another cooperative in the barangay, but it is not engaged in corn trading.

PG2 is situated 7 km from Bagabag town proper in Nueva Vizcaya. The barangay is quite remote which renders it inaccessible to other barangays. This hinders PG2 from serving adjacent areas. The PG covers an area of 83 ha, all of which are planted to corn. The usual market outlets of farmers in the area are the PG and four traders who are located in the poblacion.

PG3 is located in Villa Norte, Maddela, Quirino and is 3 km away from Maddela town proper. The PG serves two adjacent barangays and covers an area of 120 ha, all of which are planted to corn. The usual market outlets of farmers in the area are the PG itself and two traders who are holding business in the barangay. There is another cooperative in the barangay, but it is not involved in corn trading.

PG4 is located in Diarao, Jones, Isabela situated 5 km away from Jones town proper and covers a total area of 117 ha, all of which are planted to corn. The PG caters only to the farmer in the barangay. It is involved in the marketing of corn and palay, but the major commodity handled is corn. The usual market outlets of farmers in the area are the PG and six traders who are holding business in Jones town proper.

PGs in Southern Tagalog

PGs studied are located in the provinces of Batangas and Palawan. The PG studied in Batangas is located in the village of Soro-Soro which is 5 km from Batangas City.

The other PGs are in three municipalities of Palawan, two of which are in Brooke's Point and one each from Narra and Aborlan. PG2 is located in Barangay Malis, Brooke's Point. The barangay is 18 km of rough road from the town proper. PG3 is located in Barangay Mainit, Brooke's Point which is also connected by 18 km of rough roads. PG4 is found in Barangay Princess Urduja which is about 95 km away from

Puerto Princesa. PG5 is located along the national road and is 81 km away from Puerto Princesa where most of the corn traders are located.

Market outlets of most PGs in Palawan are traders located in Puerto Princesa City, the provincial capital.

PGs in Central and Southern Mindanao

The sample corn PGs in Central and Southern Mindanao are located in the provinces of Sarangani, Sultan Kudarat, and Cotabato.

PG1 is located in Malungon, a corn-producing town of Sarangani which is a very young province recently separated as a municipality from South Cotabato.

PG2 is in Surallah, South Cotabato, while PG3 is located in the town proper of Esperanza, Sultan Kudarat. Both municipalities are predominantly corn areas.

PG4 is found in Pres. Quirino, Sultan Kudarat where farmers plant yellow and white corn.

PG5 is located in Marbel, Matalam, Cotabato.

The Production-Marketing System

Corn produced by farmers moves to the end users through various channels.

PGs in Cagayan Valley

PGs in the region handled yellow and white corn from both members and nonmembers, These PGs absorbed 59 percent of the farmers' yellow corn (Fig. 4.2). The rest are sold by the farmers to the barangay agents and the municipal/provincial traders. The major outlets of the PGs are the municipal/ provincial traders and the "viajeros" from Bulacan. Some of the PGs sell directly to big-time traders in Bulacan.

In the case of white, corn, farmers (PG members and non-members) sell corn or milled form (Fig. 4.3). Milled corn (28%) are sold directly to the end users (households). These are normally for home consumption or feed supplement to backyard hog and poultry. Those sold to the PG are in unmilled form. The PG sold these to the municipal/ provincial traders in unmilled form. From the municipal/provincial traders, corn are sold to big-time traders (in Bulacan) then to millers, to retailers down to the end users.

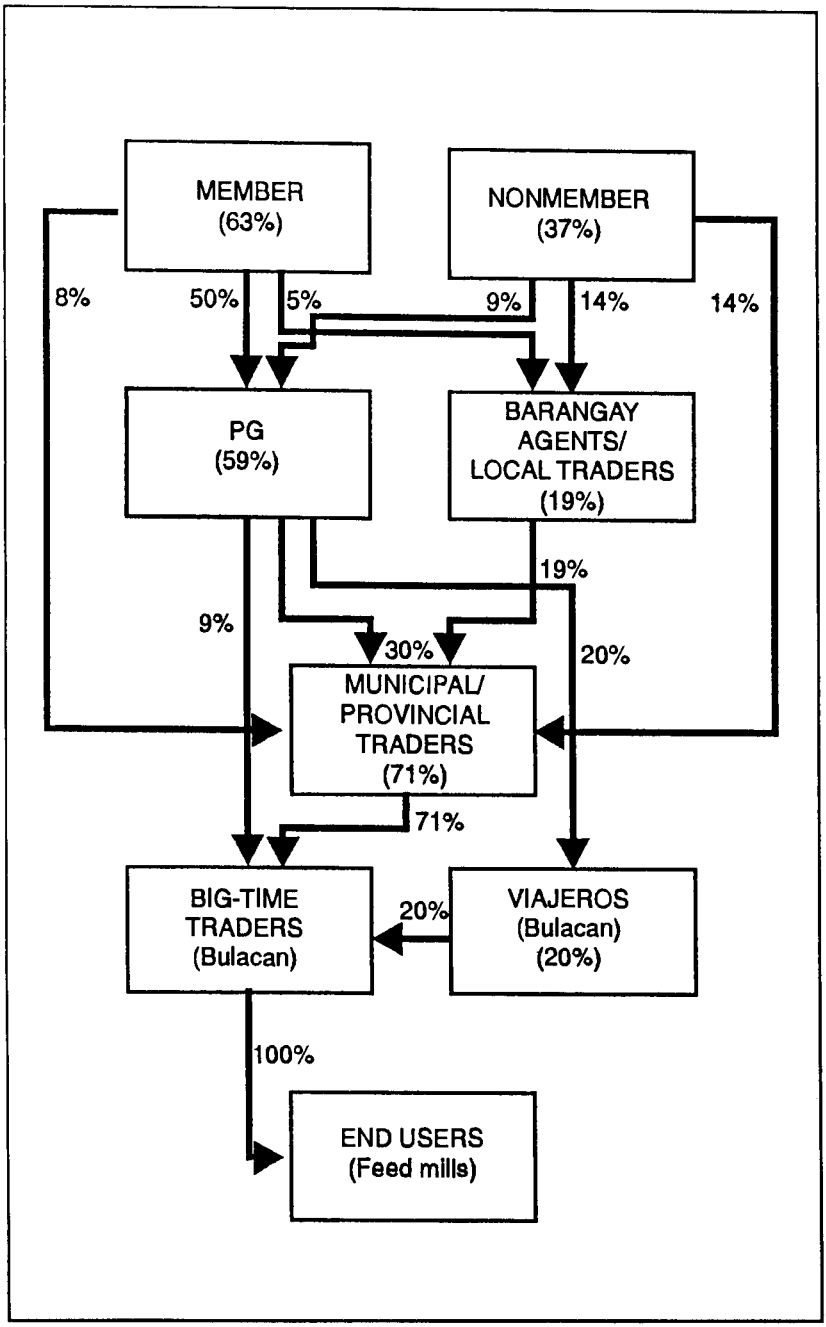

Fig. 4.2. Flow of yellow corn from producers to end users, Region II (Cagayan Valley).

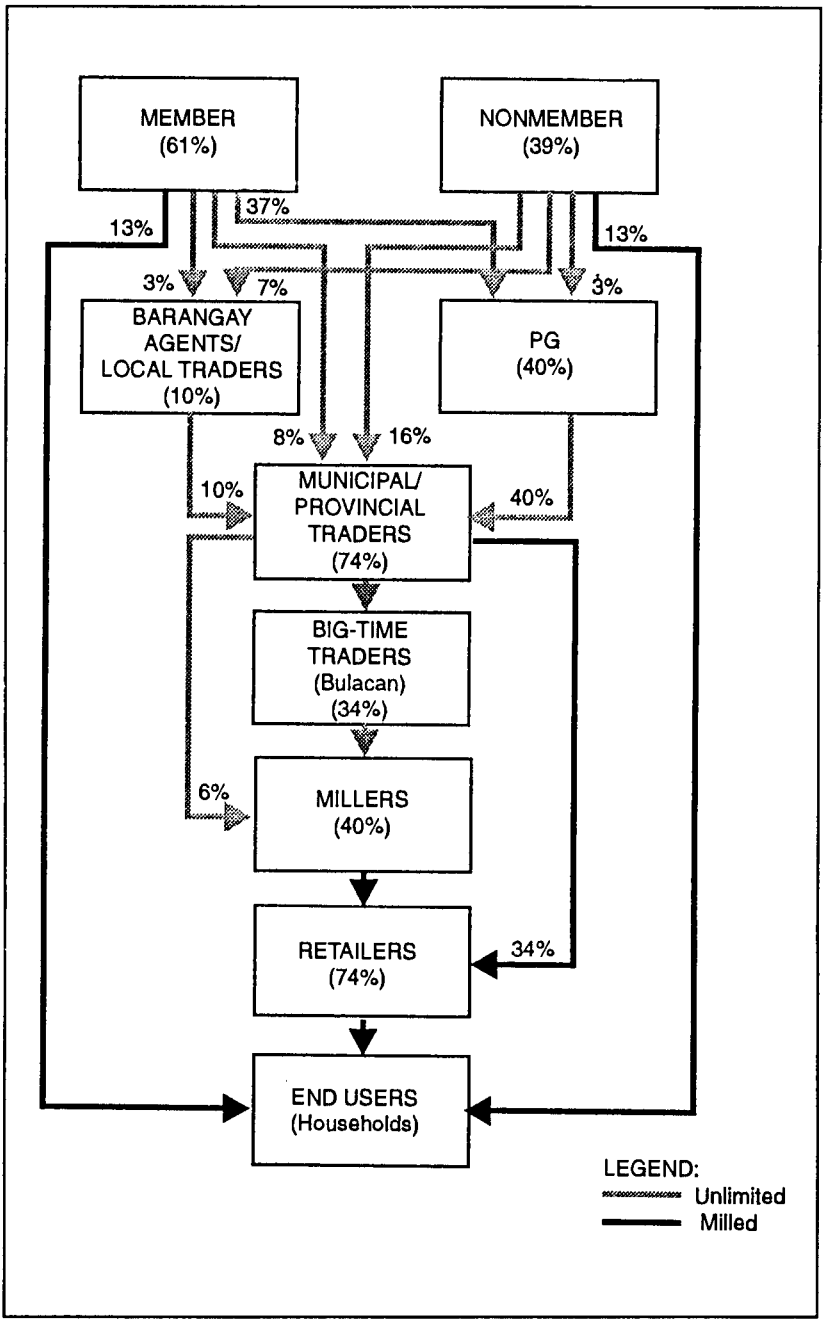

Fig. 4.3. Flow of white grain corn from producers to end users, Region II.

PGs in Southern Tagalog

Corn produced in this region are predominantly yellow corn. The common market outlets of farmers are the PGs in the community, the big-time traders and the barangay agent/local trader (Fig. 4.4). About 22 percent of the farmer-members' produce are sold directly to the big-time traders. One PG used the corn procured as feed ingredient in its feed mill. The other PGs sold their corn to big-time traders or to the other feed mills as far as San Pablo, Laguna.

PGs in Central and Southern Mindanao

PGs buy corn only from their members and in turn sell the product to the municipal/provincial traders (Fig. 4.5). Farmer-nonmembers sell their corn to barrio agent/local trader. Other outlets of the PGs include big-time traders, NFA, and direct consumers or end users.

Farmer-Members' Attitudes Toward PGs

Table 4.4 shows farmer-members' attitudes towards their PGs. The common reasons of farmers for joining the PG were: to avail themselves of credit and other benefits from the PG and to increase their income. Others joined the PG because they were convinced by other members or officers of the PG.

The majority of the farmers believed that they could best support their PG by selling their products only to their PG, paying their cooperative dues and obligations promptly, and attending regular meetings.

When they were asked on the prospect of success of their PG, they perceived that the potential of their PG is dependent on the unity of its members, the adequacy of capital to support its business activities, and handling by competent staff.

Marketing Operations and Services

Marketing services performed by PGs and traders

The different marketing services performed by PGs are shown in Table 4.5. The common services performed are procurement, grading, transport, drying, storage, and financing.

In Cagayan Valley and Southern Tagalog, PGs bought corn from both their members and nonmembers. In Central and Southern Mindanao, PGs bought corn only from their members.

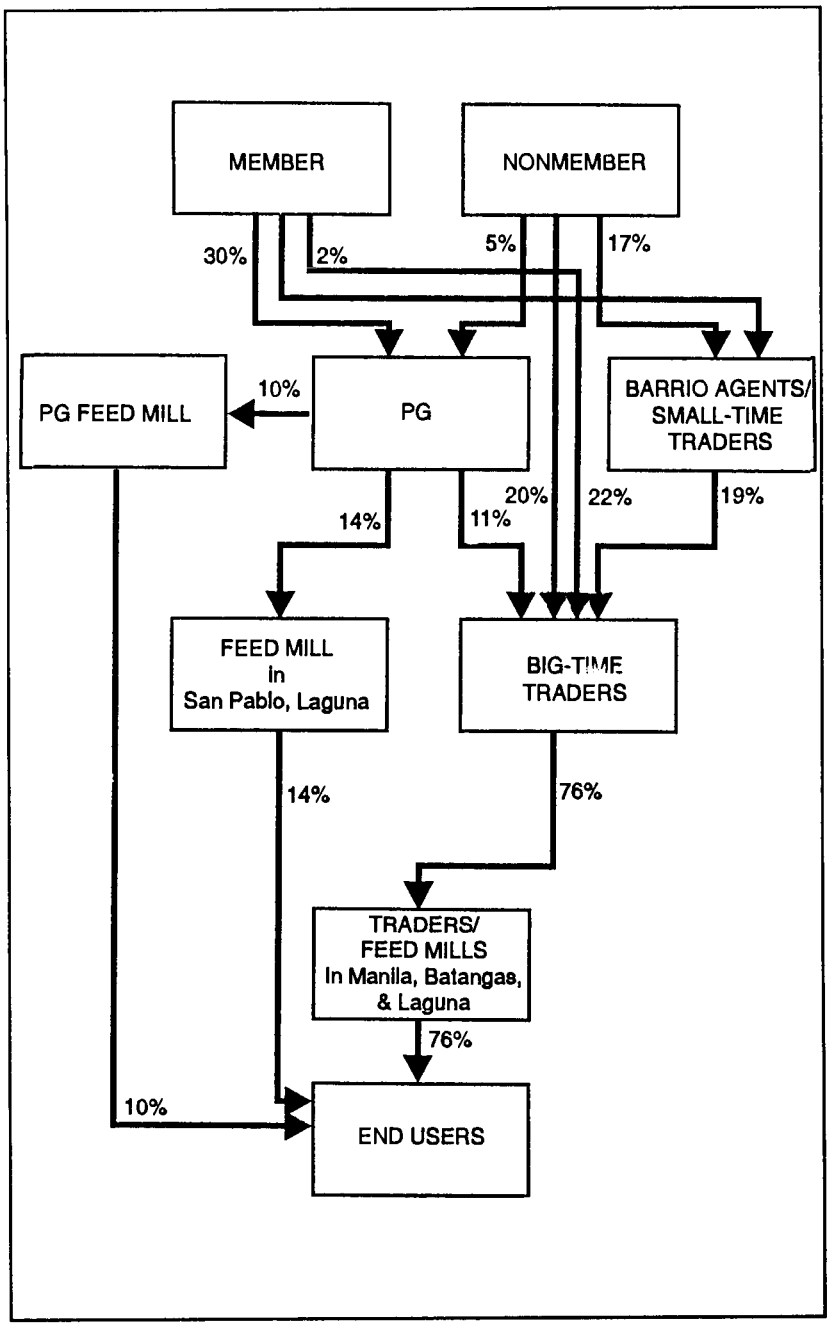

Fig. 4.4. Flow of corn from producers to end users, Region IV (Southern Tagalog).

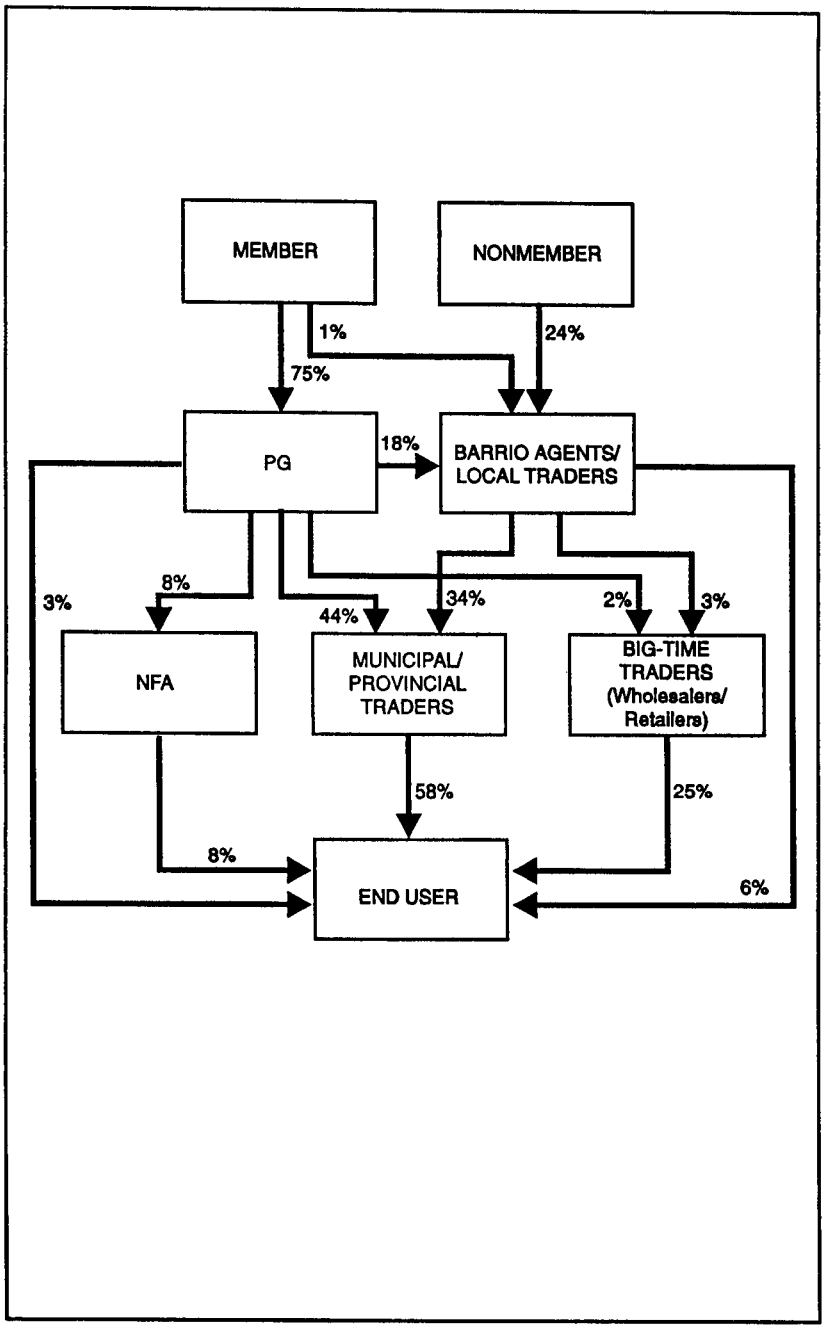

Fig. 4.5. Flow of corn from producer to end user, Regions XI and XII (Southern & Central Mindanao, respectively).

Table 4.4. Farmer-members' attitudes towards their PGs by region.

Particulars	Cagayan Valley	Southern Tagalog	Southern & Central Mindanao	Philippines
	(n=105)	(n=101)	(n=100)	(n=306)
		Percent Reporting		
Reasons for Memberships				
To avail of credit/other benefits	100	39	81	74
To increase income/uplift living condition	37	26	60	41
To help other producers/build unity among them	5	16		7
Convinced by other members/officers	3	14		6
To have cooperative experience		5		2
Interest aroused by cooperative seminar		1		a/
Ways of Supporting the PG				
Patronize cooperative products/services	100	41	42	60
Prompt payment of cooperative dues	79	25	64	55
Attendance to regular meetings	69	12	53	44
Support all PG activities		23	35	19
Comments on Potential of PG				
PG has great potential if:				
there is unity among members	59	1	52	37
there is adequate capital		16	92	35
handled by competent employees/officers	26	17	18	20
it gives additional income	30	15		15
it addresses financial needs of members		39		13
no comment		13		4

a/ Less than 1 percent.

Table 4.5. Marketing services performed by PGs and traders by region.

Marketing Services	Cagayan Valley		Southern Tagalog		Southern & Central Mindanao		Philippines	
	PG (n=4)	Trader (n=7)	PG (n=5)	Trader (n=8)	PG (n=5)	Trader (n=50)	PG (n=14)	Trader (n=65)
	Number Reporting							
Procurement	4	7	5	8	5	50	14	65
Processing	1		1	1	1	25	3	26
Storage	3	7	5	8	4	28	12	43
Transport	3	7	4	6	4	45	11	58
Grading	4	7	5	8	4	45	13	60
Packaging	1		5	7	4	45	10	52
Drying	4	7	5	7	3	31	112	45
Retailing	1		2		2	12	4	12
Wholesaling	4	7	5	8			9	15
Market Information	4	7	5	8			9	15
Technical Support	1						1	0
Product Promotion	1						1	0
Financing	4	7	5	7	4	35	13	49
Input Sale					4	35	4	35

Grading is done by ocular inspection. In Southern Tagalog, one PG used moisture meter. PGs imposed price reduction for corn grains with moisture content above the required 14-15 percent. Dry corn grains command a higher price than wet grains. In Cagayan Valley, corn grains are classified according to variety, i.e., white or yellow, and according to moisture content. White corn commands a higher price than yellow corn because it can be used for human consumption and livestock feed. Traders and PGs use the national road (Philippine-Japan Friendship Highway) to dry their corn. Corn grains are normally sun dried from 1 to 2 days.

In all the regions studied, none of the PGs owned and used mechanical dryers.

Eleven PGs performed the transport function. Two PGs in Cagayan Valley extended transport services to their members during procurement period. One PG hauled members' corn for free from their farm to the PG. The other PG hauled the members' corn for a fee of P3.00/sack if the corn to be hauled was at least 30 cavans and the members' farm was within a 15 km radius from the PG. In Southern Tagalog, two PGs provided transport to the farmers by having their corn picked up at the farmer's place or roadside. One PG performed transport function by delivering corn from the PG office to its feed mill. Its transport vehicle was also used to haul feeds to their customers.

Financing was performed by 12 PGs. Financing for members was in cash or in kind at interest rate ranging from 1.75 percent to 2 percent per month. In Cagayan Valley, PGs availed of loan from the LBP under its institutional lending program. The said loan was in turn extended by PGs to farmer-members in the form of production loan with a maximum loanable amount of P6,000/ha payable in 4-6 months. PGs collected 2 percent service fee per member in addition to the 1.75-2 percent interest per month. All traders performed the marketing functions of procuring, storing, transporting, grading, hauling, and financing.

Traders procure corn from other traders, PGs, or directly from farmers. All traders maintain their own transport facilities for hauling corn. Traders also offer loans to farmers, but they definitely charge a higher interest rate than the PGs. Market information search and intelligence are very vital to the trader since these pieces of information are needed in setting the buying price of corn. Traders particularly pay attention to signals pertaining to supply, prices, and demand of corn in Bulacan and Metro Manila as these significantly affect their business operations.

Marketing arrangements

Table 4.6 shows the marketing arrangements employed by the 14 sample PGs.

Buying arrangement. All PGs and traders purchased corn from farmers in unprocessed form (i.e., shelled). Nine out of the 14 PGs under study picked the corn from the farm. By region, all PGs in Central and Southern Mindanao picked corn from the farm whereas only two out of four sample PGs in Cagayan Valley did the same. PGs bought the members' produce on credit. Only one PG did not charge transport fee from its members; all others charged a fee of P3.00/sack. Two PGs asked their members to deliver their corn to the PG buying station, in which case transport cost of P1.00/sack was refunded by the PG. Farmers were paid in cash upon delivery. Some members who had urgent need of cash were given advance payment a few days before they sold their produce. In Southern Tagalog, two PGs picked corn from the members' farm and paid cash on the spot. Members of three PGs delivered their corn to the PG office and were paid in cash.

Selling arrangement. Most PGs sold corn in unprocessed form (shelled) to their outlets which were the municipal/ provincial traders, big-time traders, and feedmillers. One PG in Cagayan Valley sold both shelled and milled corn. Milled corn was sold directly to households through the PG's consumer store. In Southern Tagalog, one PG processed the corn into feeds and sold the feed directly to members. Feeds are either sold directly at the PG office, picked by members from the feedmill, or delivered by the PG to members within the barangay. Where members went directly to the feedmill, a discount of P3.50 per bag was given to the buyer to pay for the transport cost.

In Cagayan Valley, the product was picked up by the buyers from PGs, while in Central and Southern Mindanao, PGs delivered the product to the buyers' place.

Comparative marketing operations

The marketing operations of the PGs and traders are compared in terms of volume handled, buying and selling prices, marketing margins, and marketing costs (Table 4.7).

As shown earlier (Fig. 4.1), Central and Southern Mindanao accounted for approximately 53 percent of annual corn production of the country in 1980-1990. Expectedly, PGs and traders in these regions handled bigger volume of corn than their counterparts in Cagayan Valley

Table 4.6. Buying and selling arrangements of PGs and traders by region.

Particulars	Cagayan Valley		Southern Tagalog		Southern & Central Mindanao		Philippines	
	PG (n=4)	Trader (n=7)	PG (n=5)	Trader (n=8)	PG (n=5)	Trader (n=50)	PG (n=14)	Trader (n=65)
				Number Reporting				
A. Buying Arrangements								
Form of Product								
unprocessed	4	7	5	8	5	50	14	65
Mode of Procurement								
picked-up from source	2	4	2		5		9	4
delivered to PG/trader	2	3	3	8		50	5	61
Mode of Payment								
cash on delivery		3	2				2	3
credit				1	5	33	5	34
advance payment						9	0	9
combination of cash on delivery and advance payment	4	4	3	7			7	11
B. Selling Arrangements								
Form of Product								
unprocessed	3	7	4	7	3	40	10	54
processed			1	1			1	1
both	1				2	10	3	10

Table 4.6. (Continued).

Particulars	Cagayan Valley		Southern Tagalog		Southern & Central Mindanao		Philippines	
	PG (n=4)	Trader (n=7)	PG (n=5)	Trader (n=8)	PG (n=5)	Trader (n=50)	PG (n=14)	Trader (n=65)
				Number Reporting				
Mode of Sale								
picked-up by buyer	4	7	3	7		13	7	27
delivered to buyer			2	1		37	2	38
Mode of Payment								
cash on delivery	4	7	3	7	5	50	12	64
credit				1			0	1
combination of cash on delivery and advance payment			2				2	0

Table 4.7. Comparative marketing operations of PGs and traders by region.

Particulars	Cagayan Valley				Southern Tagalog				Southern & Central Mindanao			
	PG		Trader		PG		Trader		PG		Trader	
	Yellow	White	Yellow	White	Yellow	White	Yellow	White	Yellow	White	Yellow	White
Volume Handled (100 kg)	204	41	503	184	324	5371	140	8000	4200	157	10012	193
Selling Prices*	523	594	519	577	480	330	425	330	459	795	477	756
Buying Prices*	477	511	484	533	412	156	387	159	367	524	392	569
Production/Processing Cost						155		152		9		9
Effective Buying Price						311		311		533		578
Marketing Margin (MM)	46	83	35	44	68	19	38	19	92	262	85	178
Marketing Cost (MC)												
Transport	2.5	2.75	4	4.5	6.5	0.06			6.68	7.37	8.92	9.6
Salaries & wages	6.25	8.25	5	5.25	3.5							
Labor	4	4	0.25	0.25	6.25		3.45		2.56	4.1	3.2	4.1
Supplies & materials	4.75	3.5	2.5	2.5	9.5	0.02	1.25	0.02	10	10	10	10
Incentive/commission			0.25	1.8	6	0.45						10
Tax/License	6.25	4.5	5	5.25	0.2	0.09	0.5	0.09				
Depreciation	4.25	3	1	2.2	6	0.33	5.75	0.33				
Drying									3.6	3.6	3.6	3.6
Interest expense					10.5	0.11			0.31			
Others	4	3	3		1.45	1.95			2.2			
Subtotal	32	29	21	21.75	49.9	3.01	10.95	2.95	32.84	25.07	25.72	26.3
Total Cost	509	540	505	555	462	314	396	314	400	558	418	604
Net Profit	14	54	14	22	18	16	27	16	59	237	59	152
MC as % of MM	70	35	60	49	73	16	29	16	36	10	30	15
NP as % of MM	30	65	40	51	27	84	71	84	64	90	70	85

* P/100 kg.

and Southern Tagalog. Comparing the volume handled by traders and PGs in Central and Southern Mindanao, the former handled two times more volume than PGs. This could be due to the fact that traders had a wider area of coverage, whereas PGs bought corn only from their members as payment for loans. This was alsot true in Cagayan Valley. While PGs in this region bought corn from members and nonmembers, their volume of operation was limited by their available capital for procurement which was equivalent to the production loan availed by the members.

In Central and Southern Mindanao, the buying and selling prices of corn averaged P3.76/kg and P4.59/kg, respectively. On the other hand, traders' buying and selling prices averaged P3.92/kg and P4.77/kg, respectively. The higher buying price of the traders served as an incentive for the farmers to deliver their produce to the traders' buying stations which were located in municipal centers. In Cagayan Valley the buying and selling prices of yellow corn were P4.77/kg and P5.23/kg, respectively. On the other hand, the traders' buying and selling prices of yellow corn were P4.84/kg and P5.10/kg, respectively. The buying price of PGs was lower than that of traders, one apparent reason being that the PGs only bought and sold corn during the harvest season (peak months) when corn price was low whereas traders made transactions throughout the year (both peak and lean months). During lean months, almost all the corn were in the hands of traders. On the contrary, the buying price of traders was lower than that of the PGs in Southern Tagalog (P3.87/kg for trader and P4.12/kg for PGs) probably because of the exiting credit marketing tieup between traders and corn farmers. Traders provided loans at no interest, but farmers were obliged to sell their produce to them. Also, PGs offered higher price to capture a greater bulk of the farmer-members' produce. The lone PG which sold feeds had a similar selling price as the traders selling feeds. Its buying price of corn, however, was lower, P1.56/kg of P4.00 lower than the trader.

Comparing the marketing margins between PGs and traders, the former had a wider margin than the latter. Cagayan Valley PGs received a margin of P46/100 kg of corn which was P11.00 higher than that of the traders. While the marketing margin of PGs was higher than that of traders, PGs incurred higher marketing cost. Similarly, in Southern Tagalog, the marketing margin of PGs was higher compared with that of traders (P68 vs. P38), but their marketing cost was higher.

Among PGs, the highest marketing cost items were : supplies and materials (sacks included): transport; incentives/commission; salaries and wages, and labor. Similarly, traders incur high cost for these items. However,they were comparatively lower than those incurred by PGs.

This lower marketing cost is in a way related to the higher volume handled by the traders. With the larger volume handled, the trader is able to lessen its transaction cost per unit, hence, the net profit of traders was higher than that of PGs.

Marketing Efficiency

Comparative buying prices of PGs and traders

In Southern Tagalog, PGs bought corn at a premium of P5-10/100 kg of corn sold by members (Table 4.8). This also explains the relatively higher selling prices of the farmer-members compared with the nonmembers. Despite the higher buying prices of PGs, however, approximately 48 percent of the farmer-members' produce were sold to traders because of the credit-marketing tieup with the farmers.

In contrast, in Cagayan Valley, the average buying price for yellow and white corn of traders was higher than that of PGs. This could be explained partly by the fact that the PGs bought and sold corn only during harvest season (or peak months) when price of corn was relatively lower, whereas, traders operated the whole year. Comparing buying prices of yellow and white corn, the latter was priced higher since it was used for human consumption and as feed ingredient.

Similarly, in Central and Southern Mindanao, traders offered higher price than PGs. As discussed earlier, traders offered higher price to serve as incentive for farmers to bring their produce to the traders stations which were locatedin the municipal centers.

Comparative selling prices of PGs and traders

Selling prices of PGs in Southern Tagalog were relatively higher than their counterpart traders. This was due to the ability of PGs to reach out to other market outlets and not just depend as the local traders (Tables 4.7 and 4.9). One PG was able to sell directly to the feedmill agent, whereas its counterpart trader had a barrio agent. Another PG was linked to a big-time traders. These are indications that the higher selling price of PGs are due to their ability to sell corn through a shorter marketing channel.

In Cagayan Valley, selling prices of PGs were relatively higher than those of traders, specially for white corn. PGs were able to sell some of their corn products to the big-time traders of Bulacan which the local traders could not do (Fig. 4.3). During lean months, May-July and November-February, PGs do not buy and sell corn because of limited procurement funds. Moreover, during these periods, corn is already in

Table 4.8. Comparative buying prices of PGs and traders, and selling prices of farmer-members and nonmembers by region.

Particulars	Cagayan Valley	Southern Tagalog	Southern & Central Mindanao	Philippines
Buying Price (P/100 kg)				
PG				
yellow corn	477	4850	367	428
white corn a/	511			511
Trader				
yellow corn	484	431	392	432
white corn a/	533			533
Selling Price (P/100 kg)				
Farmer-member				
yellow corn	487	439	367	427
white corn a/	492			492
Farmer-nonmember				
yellow corn	475	406	370	413
white corn a/	480			480

a/ For Cagayan Valley Region only.

Table 4.9. Comparative monthly selling price of PGs and traders by region.

Particulars	Cagayan Valley				Southern Tagalog		Southern & Central Mindanao		Philippines	
	PG		Trader							
	Yellow	White	Yellow	White	PG	Trader	PG	Trader	PG	Trader
Pesos per 100 kg										
January			523	578			363	349	363	483
February			523	578			395	410	395	504
March	548	640	525	588			470	471	553	528
April	548	640	525	588			459	506	549	540
May			532	585			545	594	545	570
June			532	585			581	640	581	586
July			532	585			513	598	513	572
August	506	563	495	560	473	402	414	408	489	466
September	506	563	495	560	473	426	424	467	492	487
October	506	563	495	560	474	419	420	400	491	469
November			523	578	460	409	465	441	463	488
December			523	578			378	402	378	501
Average	523	594	519	577	480	425	452	474	484	516
Average a/	523	594	507	571						

a/ Monthly average price during months PGs buy and sell corn.

the hands of the municipal/provincial traders, except for small amounts stored in the farmers' residences. Unlike PGs, corn traders operated the business throughout the year.

In Central and Southern Mindanao, selling prices of PGs were relatively lower compared with those of traders. Two PGs even sold their produce to barangay agents/local traders (Fig. 4.4).

Regional selling price differences can be observed to both PGs and the traders. Prices in Central and Southern Mindanao were lower compared with Cagayan Valley and Southern Tagalog regions.

Comparative marketing efficiency of PGs and traders

Using marketing cost as an indicator of marketing efficiency, traders in general are more efficient than PGs across the regions under study (Tables 4.7 and 4.10). Cagayan Valley traders were able to keep their labor cost very low. Because of the high volume of corn handled, they were able to take advantage of economies of scale. Also, these traders dealt with a number of commodities, hence, were able to maximize the use of their marketing facilities. A lower marketing cost was incurred in white corn trading by both PGs and traders, but the traders' cost was still lower compared with that of PGs.

In Southern Tagalog, Central and Southern Mindanao, PGs were not able to take advantage of the bigger volume of corn handled. These PGs paid high salaries and wages, incentives/ commissions, and interest expenses which the traders did not have to pay for, if they did were kep to a minimum. In Central and South Mindanao particularly, the amount spent for incentives/commissions was remarkably high. In feed milling, the PG and traders in Southern Tagalog had more or less the same marketing cost. This PG and traders deal with the same outlets.

Marketing Constraints, Coping Mechanisms, and Support Services to PGs

Table 4.11 shows the marketing constraints faced by PGs and their coping mechanisms, while the various support services provided the PGs by various government and nongovernment agencies are presented in Table 4.12.

The most common problem faced by PGs in the regions under study was the high amount of receivables and the low repayment rate among members. To cope with these two related problems, the PGs tried to maintain competent officers and employees in charge of collection. A house-to-house collection was done. For two who cannot pay their maturing obligations, one PG in Region IV demanded a promisory note from its nonpaying member.

Table 4.10. Net margins of PGs and traders by region.

Particulars	Selling Price	Buying Price	Marketing Margin	Marketing Cost	Net Margin
Cagayan Valley					
PG (yellow, shelled) a/	523	477	46	32	14
PG (white, shelled) a/	594	511	83	29	54
Trader (yellow, shelled) a/	519	484	35	21	14
Trader (white, shelled) a/	577	533	44	22	22
Southern Tagalog					
PG (shelled) a/	480	412	68	18	50
PG (feeds) b/	330	311	19	3	16
Trader (shelled) a/	425	387	38	11	27
Trader (feeds) b/	330	311	19	3	16
Central & Southern Mindanao					
PG (shelled) a/	459	367	92	33	59
PG (corn grits) c/	795	533	262	25	237
Trader (shelled) a/	477	392	85	26	59
Trader (corn grits) c/	756	578	178	26	152

a/ Values are in pesos per 100 kg of shelled corn.
b/ Values are in pesos per 50 kg feeds.
c/ Values are in pesos per 100 kg corn grits.

Table 4.11. Marketing constraints and coping mechanisms of PGs by region.

Particulars	Cagayan Valley (n=4)	Southern Tagalog (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=14)
Marketing Constraints				
1. High amount of receivables and low repayment	2	4	5	11
2. Poor quality of corn produced		2	5	7
3. Inadequate transport and communication facility	2		1	3
4. Unstable supply/price of corn		1		1
5. Poor road network			1	1
6. Power shortage		1		1
Coping Mechanisms				
1. a. house-to-house collection	2	2	5	9
b. maintain competent officers for collection		1		1
c. demand promisory note from nonpaying members		1		1
2. a. perform quality analysis and apply appropriate price		1	5	6
b. reject poor-quality corn		1		1
3. a. use members to haul other members' product	1			1
b. offer higher price to corn delivered by members directly to PG	2			2

Table 4.11. (Continued).

Particulars	Cagayan Valley (n=4)	Southern Tagalog (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=14)
c. use private individual's communication facility	1			1
4. a. make contract arrangement with traders buying from other area		1		1
b. maintain a 3-day stock inventory		1		1
5. a. ask help from LGU			1	1
6. a. use a generator set		1		1

Table 4.12. Support services provided by the different agencies/organizations by region.

Agency/ Organization	Support Services Rendered	Cagayan Valley (n=4)	Southern Tagalog (n=5)	Southern & Central Mindanao (n=5)	Philippines (n=14)
LBP	Provided loans	3	5	5	13
	Provided financial management training	4			4
	Provided training on bookkeeping				
CDA	Set cooperative policies and guidelines	4	1	4	9
	Assisted in the registration of the cooperative	4			4
	Provided training on advanced cooperatives		1		1
	Assisted in the conduct of the premembership training	4	1		5
	Provided training on cooperative management/ leadership bookkeeping				
NFA	Source market information	4			4
	Helped monitoring of prices	4			4
DA	Gave free seeds	1			1
	Provided training on corn production		2		2
	Provided training on pest management		1		1
	Provided mechanical dryers for corn and rice		1		1
LGU	Provided infrastructure support (road network)			4	4
DAR	Extended financial assistance	1			1
Cooperative Federation	Extended financial backup on LBP loans	3			3
German NGO	Provided initial capital		1		1

Poor quality of corn procured posed a major problem to PGs in Southern Tagalog, Central and Southern Mindanao. PGs graded the corn by ocular inspection. Only one PG in Southern Tagalog used a moisture meter.

Procurement funds were a problem to one PG each in Cagayan Valley and Southern Tagalog. To be able to serve their members to the fullest, these PGs disposed their corn products as soon as possible. In this way they were able to buy more corn from their members.

Two PGs in Cagayan Valley did not have any transport facility. Instead, they used the hand tractors of their members to haul their members' products. The owners were paid by their PG P1.00/sack of corn hauled. Higher prices were offered when produced were delivered to the PG trading center.

Being multipurpose cooperatives, PGs availed themselves of support services from government and nongovernment institutions. The LBP has provided the much needed loans PGs, as well as training assistance in financial management and bookkeeping. CDA helped PGs in the formulation of cooperative policies and guidelines, and in the registration of these cooperatives. NFA in Cagayan Valley provided market information, especially from potential market outlets for PGs and prices of corn in major trading centers in the country. The Cagayan Valley Cooperative (CAVALCO) Federation provided financial assistance to three PGs in addition to their LBP loans. The Department of Agriculture (DA) provided training on pest management to two PGs in Southern Tagalog. It also provided a mechanical dryer for rice and corn to one PG in the same region. In Central and Southern Mindanao, LGU supported the PGs in terms of road improvement in the PG service areas.

Benefits to Farmer-Members

PG-generated benefits

Farmers expect to obtain some benefits when joining a PG. These benefits can be in the form of dividends and patronage refund, higher product price lower input price, and lower interest rate for loans. These benefits are quantified in Table 4.13.

The gain/loss from the output price differential is computed by getting the difference in the price offered by PG to members and that of its alternative market outlet and multiplied by the volume of product sold by members to the PG There is gain if the price offered by the PG is higher than the alternative market outlet and loss if otherwise. In Southern Tagalog, farmer-members of the PGs benefitted by as much as P83.00 per member. In Cagayan Valley, the price offered by the traders

Table 4.13. Quantitative benefits of farmer-members from PGs by region.

Item	Cagayan Valley		Southern Tagalog		Southern & Central Mindanao		Philippines	
	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member
				In Pesos				
Dividend	7488	37			907	6	2785	14
Patronage Refund	12600	63	19884	393	907	6	11130	154
Cooperative Education Fund			2777	54			926	18
Gain (Loss) Due to Output Price Differential	22770	-114	8100	32	-1E+05	-618	-38265	-233
Gain (Loss) Due to Input Price Differential			269	5	60750	375	20340	127
Gain (Loss) Due to Interest Rate Differential	507		5229	72			1912	24
Total	-2215	-14	36259	566	-37561	-232	-1172	103

was higher than that of PGs, hence there was a loss to members in terms of output price differential.

The gain/loss from interest rate differential is computed in the same manner as the output price differential. There is gain if the interest rate of loan availed by members from their PG is lower than their alternative source, and loss if otherwise. Members of PGs in Cagayan Valley and Southern Tagalog benefitted from this.

Gain/Loss from input price differential is computed by getting the difference in the prices of inputs availed by members from their PG and that of their alternative source of input. There is gain if the input price offered by PG is lower than the alternative source, and loss if the price offered by the PG is higher. PG members in Cagayan Valley received a positive benefit on this item suggesting that prices of inputs the members availed from the PG were lower than their alternative source.

In Cagayan Valley and Southern Tagalog, positive benefits were generated by PGs for members in the form of patronage refund, dividend, and cooperative education fund.

Getting the total benefits generated by PGs to their members, there was positive benefit amounting to P609/member per annum in Southern Tagalog. In Cagayan Valley, while there are positive benefits for members in terms of patronage refund, dividends, and interest rate differential, the negative output price differential was far bigger making the total benefit to members negative. The loss per member, however, was low (P11).

Farmers' income

A comparison of the net income derived by farmer-members and nonmembers are shown in Table 4.14.

Farmers' net income in Cagayan Valley, Central and Southern Mindanao was generally higher than that in Southern Tagalog. This may be attributed to the higher yield per hectare in these regions as shown in Fig. 4.1. Unlike Southern Tagalog, corn was considered the major crop in the PG areas studied in Cagayan Valley and Central and Southern Mindanao.

Nonquantifiable benefits

Nonquantifiable benefits to PG members were in the form of training and seminars provided or arranged by PGs, technical support provided by various government and nongovernment organizations only to organized groups such as PGs, and other social benefits.

Members' satisfaction to the benefits they got from their PG was manifested by their very high participation in meetings called by their

Table 4.14. Comparison of net income from yellow and white [a] corn production by farmer-members and farmer-nonmembers by region.

Net Income	Cagayan Valley	Southern Tagalog	Southern & Central Mindanao	Philippines
Farmer-Member				
Per farm				
Yellow	16223	2876	9351	9483
White	6466			6466
Per hectare				
Yellow	8285	1318	5564	5056
White	9468			9468
Per 100 kg				
Yellow	232	77	56	122
White	345			345
Farmer-Nonmember				
Per farm				
Yellow	7557	2008	7153	5573
White	5270			5270
Per hectare				
Yellow	6334	1510	4672	4172
White	8251			5270
Per 100 kg				
Yellow	175	1	49	75
White	375			375

[a] For Cagayan Valley Region only.

PGs, and in training and seminars conducted or arranged by PGs (Table 4.15).

Summary and Conclusion

The findings of the study may be summarized as follows:

1. All PGs were multipurpose cooperatives registered with the CDA. Some PGs had also registered with other agencies. All PGs, except one in Southern Tagalog (which engaged in feedmilling), acted as buyers and sellers of corn grains. PGs in Cagayan Valley traded both yellow and white corn, while PGs in Southern Tagalog, Central and Southern Mindanao traded yellow corn. Two PGs in Central and Southern Mindanao traded corn grits. PGs in Cagayan Valley and Southern Tagalog

Table 4.15. Farmer-members' attendance to PG activities by region.

Activities	Cagayan Valley	Southern Tagalog	Central & Southern Mindanao	Philippines
Meetings				
a) General Assembly				
Once a year	92	100	100	97
None	8			3
b) Monthly meetings				
12x a year	56	37		31
11x a year	28	10		13
10x a year	13	53	73	46
None	3		27	10
Trainings				
		18		6
4x a year	19	33	4	19
3x a year	11	37	33	27
2x a year	61	9	63	44
None	9	3		4
Seminars				
4x a year	6			2
3x a year	20			7
2x a year	51			17
None	23			8
No response		100	100	66

bought corn from both PG members and nonmembers, whereas those in Central and Southern Mindanao bought corn from PG members only. Accessibility to the service areas of some PGs in Cagayan Valley, Central and Southern Mindanao was very difficult considering the nature of road going to these areas.

2. Corn from the PG areas moved to the final consumers through various channels. In Cagayan Valley, both yellow and white corn varieties were handled by PGs. The bulk of the corn moved from the farmer (both PG members and nonmembers) to the PG and barangay agent/local trader. Then it moved to the municipality/ provincial traders and "viajeros" down to the big-time traders and to end users. In Southern Tagalog, corn moved from farmers to the PG and barrio agents/small time trader, then, it went directly to big-time traders, which eventually sold to feedmillers in Manila, Batangas, and Laguna. One PG was engaged in feedmilling. Corn from Central and Southern Mindanao had almost similar channels as that of Cagayan Valley.

3. Farmer-members had several reasons for joing their PGs. Their most common reason was to be able to avail themselves of credit and other benefits from their PG. To support their PG, the majority of the farmers believed that they could best support their PG by selling their produce only to their PG, paying promptly their PG obligations, and attending regular meetings. The strength of their PG depends on the unity among its members, competent staff, and adequate capital in its business operations.

4. The most common marketing services performed by the PGs were procurement, grading, transport, drying storage, and financing. It is worthwhile noting that these PGs used ocular inspection as a way of grading. Only one PG used a moisture meter.

5. Generally, all (except one PG in Southern Tagalog which engaged in feed mill and two PG in Central and Southern Mindanao which traded corn grits) PGs traded shelled corn. Buying prices of PGs in Southern Tagalog were generally higher than those of traders indicating a positive direct benefit to the members patronizing their PG in Cagayan Valley. PGs offered lower price compared with traders, but their operation had

generated positive income, which eventually was shared to their members in other forms of benefits.

6. All PGs were less operationally efficient than corn traders in their respective service areas. There were costs which PGs incurred, but which the traders did not have or had minimized. These costs were high salaries/wages to the employees, and provision of incentives/commissions to staff, among others. Also the traders dealt with multicommodities making their facilities and other resources fully utilized.

7. Benefits to farmer-members from the PG were in the form of dividends, patronage refunds and differentials in output and input prices, and interest rate. PG farmer-members in Southern Tagalog realize positive benefits, from their PGs. In Cagayan Valley where the prices offered by PGs were generally lower, members derived positive benefits in the form of dividends, patronage refunds, and interest rate differential. However, the effect of the negative output price differential had outweighed the other positive benefits making the total benefits per member negative.

8. Farmer-members' income from their farm operation was all positive (and was generally higher than the income of nonmembers) indicating that there was profit in farm operation. There was no indication, however, that these were attributed to their being members of their PG. The Cagayan Valley farmers had higher net income than the those in Southern Tagalog, Central and Southern Mindanao regions. The least net income was found in Southern Tagalog. In regions where corn was a major crop (Cagayan Valley, Central and Southern Mindanao), higher net income was realized by farmers compared with Southern Tagalog where corn was a minor crop.

Policy Recommendations and Suggestions for Further Research

Results of the study showed the relative importance of PGs in catering to the needs of corn farmers in their respective areas of coverage. There is a need, however, to address the various problems/ constraints and inefficiencies besetting their operation.

The following recommendations/suggestions are put forward:

1. PG operation and management should be strengthened. Assistance of CDA in assessing and providing assistance in capability building, especially in dealing with high receivables, low repayment, minimizing/ streamlining of costs and other problems were identified by PGs. LBP and other financing institutions should continuously assess the financial needs of these PGs and provide appropriate assistance.

2. PGs should be encouraged and guided to go into diversified operations to enable them to provide additional services to their members and maximize the potential of their facilities and other resources.

3. Continuous updating of the status of PGs should be done by concerned agencies such as CDA to provide accurate information on the status and operations of these PGs.

4. In addition to continuous updating of PG status, there is a need to document PGs with success stories to identify factors affecting them .that would aid policy makers in making appropriate policies for the corn industry as well as for organizations of small producers.

Reference

Center for Research and Communication, Agribusiness Factbook, 1992.

Part III

Commercial Crops

Chapter 5

Marketing of Fruits by Small Producer Groups in Cagayan Valley and Central and Southern Mindanao

Lydia P. Oliva, Alberto R. Domingo, and Lorna G. Valdez

Introduction

Importance of the Study

The fruit industry occupies an important place in the Philippine economy. It provides income, generates employment, and substantial foreign exchange for the country.

In the past, fruit consumption was considered a luxury, but today fruits are an important part of the daily diet. Thus, the demand for fruits is increasing not only in the country, but worldwide (SMARC Monitor 1987).

Fruits from the local market pass through layers of middlemen before finally reaching the consumers (PCARRD 1992). First, the fruits pass through the hands of local assembler, then to viajeros, wholesalers, and finally the retailer. This system makes the marketing cost invariably high, thus needs streamlining.

One of the fruit-growing islands in the Philippines, Mindanao, produces banana, pineapple, pomelo, durian, rambutan, papaya, and mango not only in large plantations, but also in small farms. In Southern Mindanao, expansion of area for banana had been very evident. Areas which used to be planted to coconut in Davao del Norte, Davao del Sur, and Davao Oriental, had been converted to commercial banana plantation by multinational corporations or local entrepreneurs. Small farmers in Davao City, Davao del Sur, and Cotabato had likewise shifted to banana to cater to the increasing demand for the local varieties such as lacatan,

señorita, and saba (boiling banana) (Fig. 5.1). Other fruits of increasing importance in the local and export markets such as mango, durian, rambutan, and mangosteen are now being produced in Mindanao.

In the Cagayan Valley Region (Region II), banana is considered as a major crop. The provinces of Isabela, Quirino, Nueva Viscaya, and Cagayan are the major sources of banana in the region (Figure 5.1).

It is alleged that farmers get the least, while the traders get the greatest chunk of the marketing margin. Hence, one way of increasing the farmers' share of the margin is to allow them to perform some, if not all of the marketing functions. This can be made possible by organizing them into groups, be it formal or informal.

Undoubtedly, the present system should be improved to cater to the changing needs of the small producers and to increase their share of benefits.

Hypotheses and Objectives of the Study

The general objective of this research is to assess the performance of the various producer groups (PGs) engaged in marketing of fruits in Cagayan Valley (Region II), SouthernMindanao (Region XI), and Central Mindanao (Region XII). Specifically, it aims to:

1. provide an overview of the producer-marketing-consumption systems in the fruit industry in the three regions;
2. determine and analyze the various marketing services performed over time by small PGs;
3. evaluate and compare the marketing efficiency of these organizations with alternative marketing channels/institutions;
4. identify and determine the effect of support services and other related infrastructure and policies on farmers and PGs;
5. analyze the various marketing constraints and problems and determine the coping mechanisms used;
6. evaluate the impact of these marketing groups on the social and economic well-being of farmer-members;
7. recommend some policy agenda/actions to improve the overall performance and economic efficiency of these marketing groups; and
8. develop possible research policy linkages to enhance research results utilization.

Some hypotheses of the study include the following:

1. Farmers' organization and rural-based farmer-managed

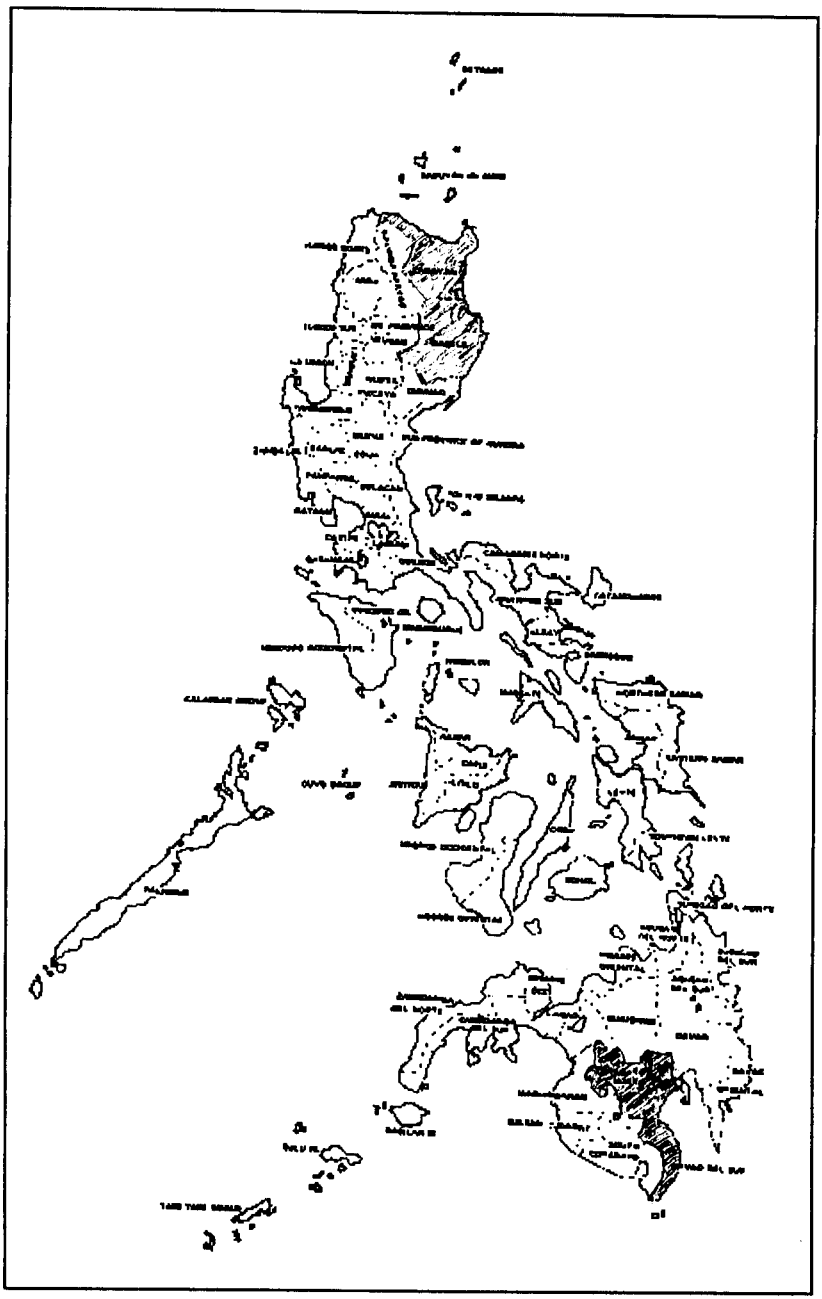

Fig. 5.1. **Map showing the location of small PGs engaged in the production and marketing of banana in Cagayan Valley and Southern Mindanao.**

marketing cooperatives are as effective and efficient as the private traders.
2. Farmer organizations are better able to capture a greater portion of the marketing margin for the farmer.
3. Performance of PGs is essentially dependent on effective management of collective action.
4. Existing policies and programs of the government related to marketing and distribution are biased toward large business.

Methodology

The areas covered by this study include Davao City and Davao del Sur of Southern Mindanao, Cotabato of Central Mindanao, and Cagayan, Isabela, Nueva Vizcaya, and Quirino of Cagayan Valley.

Data from PGs engaged in marketing of fruits were obtained through personal interviews of their officials. Sample farmer-members, nonmembers, and traders in the locality where the PGs are located were interviewed.

Secondary data such as community profile, among others, were obtained from the Cooperative Development Authority (CDA), Department of Trade and Industry (DTI), and the Municipal Coordinating and Development Office of the respective towns of the sample PGs.

From the list given by the CDA, seven PGs in Davao City were supposedly engaged in fruits. However, during the study period, only one PG was engaged in fruit marketing. The same was true for the PG for the seedling marketing (nursery business). Similarly, PGs in Davao del Sur and Cotabato were the only ones functioning in the area at the time of the survey. Hence, the five PGs are the only functional ones in the two Mindanao regions. The same was true for Cagayan Valley (5 PGs). There were more than enough traders, members, and nonmembers for the purpose of the study, hence, samples were drawn from existing list of members and traders given by PGs and DTI, respectively. In the case of nonmembers, the samples drawn were obtained through cluster sampling (by area) or systematic sampling (a random start and equal intervals afterwards, especially for the nurseries in Kidapawan).

In Cagayan Valley, respondents included 5 PGs and 9 traders engaged in banana marketing, 138 farmer-members, and 125 nonmembers (Table 5.1). Southern Mindanao had 4 fruit PGs, 3 engaged in fruit marketing and 1 in marketing of seedlings, 36 traders, 53 members, and 44 nonmembers. In the case of Central Mindanao, the study included 1 PG engaged in nursery production in Cotabato, 10 traders, 15 members, and 10 nonmembers.

Table 5.1. Distribution of respondents by region, 1992.

Region Province	Trader	PG	Farmer-Members	Farmer-Nonmembers
Cagayan Valley				
Cagayan	2	1	30	25
Isabela	4	2	48	50
Nueva Vizcaya	1	1	30	25
Quirino	2	1	30	25
Subtotal	9	5	138	125
Southern Mindanao				
Davao City	26	2	33	22
Davao del Sur	10	2	20	20
Subtotal	36	4	53	42
Central Mindanao				
Cotabato	10	1	15	10
Subtotal	10	1	15	10
Total	**55**	**10**	**206**	**177**

Empirical Findings

Characteristics of PGs

Of the five PGs studied in Cagayan Valley, three were multipurpose cooperatives engaged in corn, rice, and other crops as well as in input sales and credit which were registered with either the CDA, DTI, and the LGU. The other two were farmers' associations registered with the Securities and Exchange Commission (SEC). The oldest PG in Cagayan Valley was established in 1986, followed by one established in 1989. Another PG was established in 1990 and the last two in 1991.

The earliest PG started with a capital of P2,000 but had built up its capital five-folds (P10,000) perhaps because of the increase in membership from 25 to 120 at the time of the survey (Table 5.2). The PG established in 1989 had expanded substantially from an initial capital of P15,000 to P650,000, with almost a hundred percent increase in membership. The PG established in 1990 had no capital buildup, while one of the PGs established in 1991 had expanded seven-folds and correspondingly

Table 5.2. Characteristics of sample PGs.

Item	Region		
	Cagayan Valley	Southern Mindanao	Central Mindanao
Nature/Function			
Multipurpose	3	3	1
Farmer Association	2	1	
Year Established			
1986-1990	3	2	0
1991-1992	2	2	1
Capitalization (P)			
20000 and below	4	2	0
20001-40000	0	0	1
40001 and over	0	2	0
Membership			
20 and below	1	2	1
21-40	3	0	0
41 and up	1	2	0
Registration			
CDA	3	3	1
DTI	3	0	0
SEC	1	1	0
Mayor's Permit	1	0	0
Net Income (Pesos per PG)			
20000 and below	3	0	0
20001-40000	2	2	1
40001 and over	0	2	0

increased its membership from 37 to 142. Reported net incomes by PGs, however, only ranged between P4,000 and P30,000, despite the observed increase in capital of some PGs.

In Southern Mindanao, three PGs were engaged in fruit marketing and another in seedlings and other planting materials. The PG in Davao City covered a variety of fruits such as durian, mangosteen, mango, banana, rambutan, among others. The other two marketed single commodities (papaya for Sta. Cruz and mango for Digos, Davao del Sur). All were multipurpose cooperatives engaged in input sales and credit extension. Two PGs were established in 1990 and the other two in 1991. The PG engaged in papaya marketing started with P7,000 capital, while the one engaged solely in mango marketing started with P10,000 capital. The PG engaged in a number of fruits started with a capital of P100,000. The PG engaged in marketing of planting materials

in Davao City had the highest initial capital of P200,000. It was further observed that membership of the PGs in this region did not expand significantly. However, they somehow managed to earn high net incomes in 1992 ranging from P30,960 to as high as P624,498 per annum. All PGs were registered (3 with the CDA and one 1 with the SEC).

The lone sample PG in Central Mindanao was a multipurpose cooperative dealing mainly with marketing of seedlings and wasregistered with the CDA. All 17 members were engaged in nursery business, selling asexually-propagated seedlings of a variety of fruits, as well as forest trees. A good number of the members also had their own fruit fares, hence, were engaged in fruit marketing, but not through their PG. The PG also assisted its members in looking for buyers of fruits or provided market information. The PG earned a net income of P37,125 in 1992.

The net income of the newly-established PGs was lower than those which have operated longer, especially in Mindanao. Nonetheless, considering the initial capital, it could be surmised that the net gains were more than 50 percent of the capital investment.

Community Profile

The municipalities where the Cagayan Valley PGs were located had a total area of 236 ha planted to saba banana (boiling banana) with a corresponding production of 8,689 mt in 1992 (Table 5.3). There were 557 farmers producing saba. The 5 PGs and 16 traders served as marketing agents in the study areas.

The fruit area of the sample PG operation in Southern Mindanao (Davao City and Davao del Sur) was about 1,672 ha. In addition, about 20 ha were devoted to nursery or seedling production. In 1992, the volume of production from the fruit areas mentioned amounted to 8,140 mt of fresh fruits and 300,000 fruit seedlings.

Cotabato has about 8,700 ha for fruit production and about 36 ha for seedlings or nursery (fruits, rubber, and other tree crops). Correspondingly, a total of 2,600 mt of fruits and 680,000 fruit seedlings were produced in 1992. Only 1 PG and about 40 farmers had nursery establishments in the PG area.

The municipalities and city where the PGs under study are located had highly diversified farming systems with somewhat diverse environmental conditions. The major crops varied by location. Mango, for instance, was mostly found in Digos, Bansalan, Hagonoy, and other areas which were noted to have more or less distinct wet and dry season. The newly-established mango parcels were intercropped with cash crops or with coconut. Durian was mostly found in the farmers' backyard

Table 5.3 Profile of the PG areas.

Item	Region		
	Cagayan Valley	Southern Mindanao	Central Mindanao
Crop Area (ha) a/			
Fruits	236	1,672	8,700
Seedlings (nursery)	0	20	36
Volume of Production			
Fruits b/	8,688,659	8,140	2,600
Seedlings (no.)	0	300,000	680,000
Number of Farmers c/			
Fruit production	557	85	71
Seedling production		53	25
Number of Marketing Agents			
PGs d/	5	4	1
Traders e/	16	56	10

a/ Crop area for Cagayan Valley covered the barangays serviced by PGs, whereas Southern Mindanao included Davao del Sur and Davao City.
b/ Volume reported in Cagayan Valley in pieces, while in Southern and Central Mindanao is in tons.
c/ Number of farmers only in the municipality/city where the PGs are located.
d/ Functional PGs in the areas considered.
e/ Traders engaged in fruit marketing or marketing of seedlings.

(small-scale) or in the higher areas randomly planted or intercropped with other perennials (coconut and other fruit trees) and where there was enough water source. Similarly, rambutan, mangosteen, pomelo, and other fruits were in the backyard or small parcels (not exceeding 10 ha) or in bigger parcels, intercropped with coconut and other tree crops. Cavendish banana was grown commercially by large plantation owners. However, local varieties such as lacatan, señorita, latundan, and saba banana were mostly grown by small farmers in small parcels, but were also for commercial purposes (for local, as well as for export markets).

Farmer-Members' Attitude Toward PGs

Their were five reasons why members of the PGs in Cagayan Valley joined the cooperative, namely: (a) help uplift their living condition; (b)

borrow loans at low interest; (c) additional benefits they can derive; and (d) unity among farmers if they joined the PG (Table 5.4).

Southern Mindanao farmers joined the PG for the same reasons. In addition, they expected stable prices. Also, credible members, mostly professionals and retirees from the Department of Agriculture (DA), composed the PG. The same reasons for membership were mentioned by the respondents in Central Mindanao.

Farmer-members supported their PGs in several ways. Those from Cagayan Valley considered: (a) selling produce to the cooperative; (b) payment of annual dues; (c) patronize the cooperative (buy all goods sold by the PGs); and (d) sell produce to the PGs. Southern Mindanao respondents mentioned: (a) active participation in the marketing activities; (b) provision of commission: (c) help promote the product; (d) help solve problem; (e) payment of annual dues; (f) support PG activities; and (g) help acquire the volume demanded to quota required. Except for (a), Central Mindanao respondents considered the same reasons.

The potential of PGs in Cagayan Valley to provide additional benefit could be harnessed if PGs are managed by competent staff and that their members will give their full support to their respective PGs. On the other hand, respondents from Southern Mindanao mentioned that the PG has great potential to accomplish its mandate of providing efficient marketing services and additional benefit to its members if it has adequate postharvest and storage facilities, capital, competent officers, supportive members, and good working relationship among the officers. Central Mindanao respondents likewise underscored three factors necessary for their cooperatives to be efficient in providing marketing services and benefit to their members (adequate capital, supportive members, and good working relationship among the board members and chairman).

Marketing Services Performed by PGs and Traders

Fruit marketing

Table 5.5 shows the different marketing services performed by PGs and traders. In Cagayan Valley, the services performed by the traders, but not by PGs were packaging and drying. On the contrary, PGs processed banana into chips and stored them, services not done by traders. The rest of the services such as assembling, procurement, transporting, grading according to size, hauling, retailing/wholesaling, financing, training, technical support/market information, and market promotion were performed by both PGs and traders.

In Southern Mindanao, training, technical support, and market promotion were done only by PGs. Common services done by traders

Table 5.4. Farmer-members' attitude toward PGs.

Item	Region		
	Cagayan Valley	Southern Tagalog	Central Mindanao
No. of Farmers	138	53	15
		Percent	
Reasons for Membership			
Marketing assistance	0	85	87
Avail credit/low interest	17	47	80
Additional benefit	22	64	87
Credible members a/	0	53	80
Stable price	0	47	0
Uplift living condition	14		
Unity among farmers	2	0	0
Ways of Supporting PG			
Sales commission b/	0	100	100
Support PG activities	0	51	67
Payment of annual dues	29	13	53
Help solve problems	0	58	47
Help promote the produce	0	49	47
Help acquire volume demanded	0	42	40
Sell produce to coop	7	49	0
Patronize coop	7	0	0
Comments on PG Potentials c/			
Good relations between chairman	0	42	93
Members supportive of PG activities	11	45	80
Capital is adequate	0	58	87
Competent officers	0	60	0
It has facilities	0	6	0

a/ Credible members in the sense that they are competent, experienced, and trusted by their comembers and their outlets/buyers.
b/ Provide incentives to members who find time to help in the marketing of coop products.
c/ PG potential to provide efficient marketing services to its members and increase benefits for its members.

Table 5.5. Marketing services performed by fruit marketing PGs and traders.

Marketing Services	Cagayan Valley		Southern Mindanao	
	PG[a] (n=5)	Trader[a] (n=9)	PG[a] (n=4)	Trader[a] (n=36)
	(No. reporting)			
Assembling	5	5	0	0
Procurement	4	9	3	36
Processing	1	1	0	0
Transporting	1	9	3	36
Grading	5	5	3	3
Packaging	0	1	3	3
Storage	1	0	2	1
Drying	0	1	0	0
Hauling	2	4	0	0
Retailing	1	4	3	18
Wholesaling	4	5	3	18
Financing	3	5	2	3
Training	4	1	3	0
Tech. Support	4	1	3	0
Market Information	5	1	3	3
Market Promotion	2	1	3	0
Input Sale	0	0	3	1

[a] 0 - not performing

and PGs were procurement, transporting, grading, packaging, storage, retailing/wholesaling, market information, and input sale (fertilizers, planting materials, and chemicals).

Comparing PGs in Cagayan Valley and Mindanao, it was evident that the latter were engaged in more diversified fruit crops. The scale of marketing of banana in Cagayan Valley was very much smaller compared with that in Mindanao. Processing of banana chips is now on commercial-scale in Mindanao. Started in 1993, the factories sell chips to local and export markets. They buy fresh bananas from farmers, but at very low price set by traders or factories. Thus, with cooperatives or PGs, farmers will have competitive edge over the traders, especially with respect to the selling price of banana.

Nursery (seedling production/marketing)

Table 5.6 shows the services performed by PGs and traders engaged in seedling production and marketing. It could be gleaned that PGs and

Table 5.6. Marketing services performed by seedling marketing PGs and traders, Central Mindanao.

Marketing Service	PG[a]	Trader[a]
Procurement	1	1
Transporting	0	1
Grading	1	1
Packaging	1	1
Retailing	1	1
Wholesaling	1	1
Financing	1	0
Training	1	0
Technical Support	1	1
Market Information	1	0
Market Promotion	1	0
Input Sale	1	0

[a] 0 - not performing

traders procured, transported, did some retailing and wholesaling, and provided market information. Training programs conducted were mainly related to cooperative management. No standards were followed, hence, there was no quality control for planting materials. This aspect needs some attention considering the fact that the planting materials are perennials and poor quality would likely affect production. It would be very difficult and expensive to change crop or variety once they are established.

Buying and Selling Arrangements of PGs and Traders

Among the conventional practices in the fruit industry was the leasing of the fruit trees before the onset of the flowers. The contractor took charge of the production costs of inducing the flowers, pest control, and watching of the bearing trees prior to harvest. Harvesting was, likewise, performed by them. Contracting may also be done after the onset of the flowers. By then, the contractor is able to make a better estimate on the potential output of the existing fruit sets. Harvesting and marketing operations, including guarding of fruit trees, were also performed by the contractor. As needed, the farmer-owner's role in these schemes was to maintain the areas (weeding) and get the payment. Thus, because of the expenses that the contractor will still have to shoulder plus the risks involved, the rent paid was low.

PGs were expected to provide greater opportunities for the small fruit producers to increase their income. Accordingly, the buying and selling practices were reckoned.

Cagayan Valley PGs were engaged in banana marketing. Farmer-members delivered their produce to PGs. Products were graded by PGs according to size. The produce was paid oftentimes in cash upon delivery or sometimes on credit. Products were either picked-up at the PGs place (4 PGs) by the buyers or delivered (1 PG) by the PG to the buyer and was usually paid on cash. Fruit marketing PGs in Southern Mindanao had similar buying and selling arrangements as those in Cagayan Valley. Likewise, the seedling marketing PGs in Mindanao had similar buying and selling arrangements with their members (Table 5.7).

Marketing Operations of PGs and Traders

In Cagayan Valley, the PGs had higher gross marketing margin than the traders. This was primarily due to the bigger selling price which could also be attributed to the size. The bigger banana was more expensive than the small ones and the price was based on per piece rather than on weight. Marketing costs incurred by PGs were also smaller than those of traders because PGs did not shoulder the transport or delivery costs. The produce were picked up by buyers. The high gross margin and the lower transport costs incurred by traders resulted in a higher net income (30% of the gross margin) than PGs (12%).

Meanwhile, the PG engaged in papaya marketing in Southern Mindanao, procured papayas at a higher price than the traders. Their selling prices were also higher. Moreover, PGs incurred higher marketing costs mainly because of the high commission given to the members who directly got involved in papaya marketing. The net margin accruing to the PGs was, therefore, lower compared with that of traders. Similarly, lower net incomes were obtained from mango, durian, and banana (Table 5.8).

Except for mango in Central Mindanao, a similar scenario could be gleaned in nursery production. The PG bought at a higher price from its members and sold at about the same price as the traders (Table 5.9).

Buying and Selling Prices of Selected Fruits

The supply of fruits is usually seasonal. Hence, off-season harvest usually enjoys some price premium. As shown inTable 5.10, prices of the different fruits were about 37 percent higher during off-season than during the peak season. This implies that technologies to induce fruiting during off-season may be more profitable than expanding the production area.

Table 5.7. Buying and selling arrangements of PGs and traders.

Item	Cagayan Valley		Southern Mindanao		Central Mindanao	
	PG (n=5)	Trader (n=9)	PG (n=4)	Trader (n=26)	PG (n=1)	Trader (n=10)
			No. reporting			
A. Buying						
Form of Product						
Fresh fruit	5	9	3	16	0	0
Seedlings	0	0	1	10	1	10
Mode of Procurement						
Delivered by farme	5	9	4	26	1	10
Picked-up	0	9	0	26	0	10
Mode of Payment						
Cash on delivery	3	0	2	0	0	0
Credit/Consignment	0	0	1	0	0	0
Both	2	9	1	26	1	10
B. Selling						
Form of Product						
Fresh fruit	5	9	3	16	0	0
Dried (banana chip	1	1	0	0	0	0
Seedlings	0	0	1	10	1	10
Mode of Procurement						
Delivered by PG	1	0	0	0	0	0
Picked-up	4	0	1	0	1	0
Both	0	9	3	26	0	10
Mode of Payment						
Cash on delivery	0	0	0	0	0	0
Credit/Consignment	0	0	0	0	0	0
Both	5	9	4	26	1	10

Table 5.8. Support services provided by different agencies to PGs.

Agency/Services	Cagayan Valley (n=5)	Southern Mindanao (n=4)	Central Mindanao (n=1)
CDA			
Assists in registration at CDA	3	3	0
LBP			
Provides loan	2	1	0
LGU			
Facilitates issuance of permit	1	0	0
Provides trainings & tech. assistance	1	0	0
DTI			
Conducts trainings	3	3	0
DA			
Tech. assistance/trainings	0	3	1

In the case of durian and mango seedlings, traders usually offered lower prices. The PGs in Southern Mindanao offered higher price and sold the seedlings of much higher prices than the traders resulting in a higher gross margin. In contrast, PGs in Central Mindanao offered higher prices, but sold at more or less the same prices as traders, giving PGs lower gross margin than traders (Table 5.11).

Marketing Efficiency of Fruit PGs and Traders

Operational efficiencies of traders and PGs in fruit marketing varied according to region and commodity. In Cagayan Valley, traders incurred higher marketing costs than PGs despite the lower spoilage (19% as against 21 % of PGs). In terms of pricing efficiency, banana price ratio for PGs higher than for traders. Marketing margin of banana for PGs was higher than the traders. A higher ROI (10%) was likewise obtained by PGs (Table 5.12).

For papaya marketing in Southern Mindanao, the PG incurred a higher marketing cost than traders. The price ratio and marketing margin of the PG was lower. The net profit and the ROI obtained by the PG were also lower. A similar trend could be observed for durian. Meanwhile, for mango marketing, PGs had lower marketing cost, price ratio,marketing margin, net income, and ROI than traders. In the case

Table 5.9. Comparative marketing operations of fruit marketing PGs and traders.

Item	Cagayan Valley		Southern Mindanao							
	Banana		Papaya		Mango		Durian		Banana	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Average Volume Handled (mt)	0.25	0.37	28.25	115.75	32.00	1,086.98	14.39	14.10	95.20	13.00
					(P/100 kg)					
Selling Price	617.00	609.00	650.00	625.00	1,650.00	5,250.00	5,200.00	1,000.00	1,000.00	1,000
Buying Price	528.00	533.00	450.00	1,350.00	1,300.00	4,650.00	4,350.00	750.00	725.00	725.00
Marketing Margin (MM)	89.00	76.00	150.00	175.00	300.00	350.00	600.00	850.00	250.00	275.00
Marketing Cost (MC)										
Transport a/	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Commission b/	14.00	14.00	28.00	10.00	33.00	6.00	236.00	234.00	45.00	45.00
Handling	12.00	9.00	5.00	5.00	10.00	10.00	5.00	5.00	5.00	5.00
Food	10.00	5.00	0.00	10.00	0.00	10.00	0.00	0.00	0.00	0.00
License fee	4.00	4.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spoilage	-	-	20.00	15.00	36.00	36.00	158.00	156.00	100.00	100.00
Crates/Kaing	-	-	50.00	50.00	75.00	75.00	50.00	50.00	0.00	0.00
Miscellaneous expenses	10.00	22.00	10.00	10.00	10.00	10.00	20.00	20.00	10.00	10.00
Total Cost (TC)	50.00	64.00	124.00	111.00	175.00	158.00	480.00	476.00	171.00	171.00
Net Income (NI)	39.00	12.00	26.00	64.00	125.00	192.00	120.00	374.00	79.00	104.00
MC as % of MM	56.00	84.00	83.00	63.00	58.00	45.00	80.00	56.00	68.00	62.00
NI as % of TC	78.00	19.00	21.00	58.00	71.00	122.00	25.00	79.00	46.00	61.00

a/ Including packaging and grading.
b/ Commission to members performing as agent to cooperative and agents of traders.

Table 5.10. Comparative marketing operations of seedling marketing PGs and traders.

Item	Nursery PGs a/							
	Southern Mindanao				Central Mindanao			
	Durian		Mango		Durian		Mango	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Volume Handled (pcs)	2,034	5,766	9,500	34,900	2,034	5,766	9,500	34,900
	(per 100 seedlings)							
Selling Price	3,873	3,500	1,500	1,500	3,500	3,500	1,500	1,500
Buying Price	3,500	3,000	1,200	1,000	3,000	3,000	1,200	1,000
Marketing Margin (MM)	373	500	300	500	500	500	300	500
Marketing Costs (MC)								
Transport	100	100	100	100	100	100	100	100
Commission	25	0	15	0	25	0	15	0
Handling	3	3	3	3	3	3	3	3
Food	0	10	0	10	0	10	0	10
License fee	1	1	1	1	1	1	1	1
Mortality	150	150	60	50	150	150	60	50
Miscellaneous expenses b/	20	20	20	20	20	20	20	20
Total Cost (TC)	299	284	199	184	299	284	199	184
Net Income (NI)	74	216	101	316	201	216	101	316
MC as % of MM	80	57	66	37	60	57	66	37
NI as % of TC	25	76	51	172	67	76	51	172

a/ The nursery also produced other fruit planting materials such as Bangkok santol, jackfruit, chico, and forest fruits.
b/ Include watering and maintenance, classifying, and chemicals.

Table 5.11. Buying and selling prices of selected fruits (fresh) of PGs and and traders, 1992.

Item	Fruit	Cagayan Valley		Southern Mindanao		Central Mindanao	
		PG	Trader	PG	Trader	PG	Trader
		(P/100 pcs)		(P/kg)		(P/kg)	
Buying Price							
Peak Months	Pomelo	-	-	10.00	9.00	-	-
	Durian	-	-	35.00	32.00	-	-
	Lanzones	-	-	12.00	10.00	-	-
	Mango	-	-	12.00	12.00	-	-
	Banana	50.53	51.40	6.00	5.50	5.00	5.00
	Rambutan	-	-	9.00	8.50	-	-
	Papaya	-	-	5.00	4.50	-	-
Lean Months							
	Pomelo	-	-	20.00	15.00	-	-
	Durian	-	-	58.00	55.00	-	-
	Lanzones	-	-	25.00	25.00	-	-
	Mango	-	-	26.00	25.00	-	-
	Banana	55.00	55.40	9.00	9.00	9.00	9.00
	Rambutan	-	-	16.00	16.00	-	-
	Papaya	-	-	7.00	7.00	-	-
Selling Price							
Peak Months							
	Pomelo	-	-	12.00	12.00	-	-
	Durian	-	-	45.00	44.00	-	-
	Lanzones	-	-	18.00	18.00	-	-
	Mango	-	-	20.00	20.00	-	-
	Banana	60.53	58.80	10.00	10.00	9.00	9.00
	Rambutan	-	-	18.00	18.00	-	-
	Papaya	-	-	6.00	6.00	-	-

Table 5.11. (Continued).

Item	Fruit	Cagayan Valley		Southern Mindanao		Central Mindanao	
		PG	Trader	PG	Trader	PG	Trader
		(P/100 pcs)		(P/kg)		(P/kg)	
Lean Months							
	Pomelo	-	-	25.00	25.00	-	-
	Durian	-	-	60.00	55.00	-	-
	Lanzones	-	-	25.00	25.00	-	-
	Mango	-	-	25.00	24.00	-	-
	Banana	62.80	62.93	12.00	12.00	-	-
	Rambutan	-	-	25.00	24.00	-	-
	Papaya	-	-	8.00	8.00	-	-

Table 5.12. Comparative buying and selling prices of fruit seedlings of PGs and traders, 1992.

Item	Fruit	Southern Mindanao		Central Mindanao	
		PG	Trader	PG	Trader
		(P/100 seedlings)			
Buying Price					
	Pomelo	3,400	3,200	2,300	2,300
	Durian	3,500	3,000	4,000	3,500
	Lanzones	3,300	2,850	1,200	1,000
	Mango	3,000	2,750	1,300	1,300
	Rambutan	900	850	3,000	2,750
Selling Price					
	Pomelo	3,500	3,500	2,500	2,500
	Durian	4,000	4,000	4,500	4,000
	Lanzones	4,000	3,000	1,500	1,500
	Mango	3,000	3,000	1,500	1,500
	Rambutan	1,800	1,800	3,500	3,500

of banana, the PG had lower marketing cost, price ratio, marketing margin, and profit, but 1 percent higher ROI than traders.

In seedling marketing for Southern Mindanao, the mango and durian PGs incurred higher marketing cost than traders (Table 5.13). The price ratio for mango was the same for both PG and traders, but for durian, the PG had a lower price ratio than traders. The marketing margin of the PG for mango was higher, but lower for durian. Correspondingly, the net profit obtained by the PG for mango was higher and for durian, lower. In Central Mindnao, the marketing of mango and durian more or less followed the same trend as durian in Southern Mindanao.

Marketing Constraints and Coping Mechanisms of PGs

Table 5.14 shows the different marketing constraints met by the PGs and mechanisms for coping these. Cagayan Valley PGs encountered difficulties in procuring the produce of farmers because they had no postharvest facilities, their members were individualistic, had inadequate marketing knowledge, poor roads and communication facilities, and no transport facilities. They tried to cope with these problems in procurement by selling unripe bananas, conducting training, and encouraging members to observe other farmers who know marketing, proper scheduling of farmers' selling, rented service trucks to haul in bulk and actual visit of training centers. In addition to the constraints in procurement they also mentioned some financial problems such as lack of funds and unwise use of loans but some were able to negotiate for loans and assigned technicians to monitor their members to insure that the loans were spent properly. Technicians were also utilized to support the technical needs of members.

In Southern Mindanao, PGs procurement constraints such as the high perishability of fruits and lack of storage and transport facilities. They were able to cope with these constraints by proper handling, purchase of cheap storage facilities, and a pick-up arrangement with their buyer. The fruit marketing was highly competitive so they had to improve fruit quality through proper handling and packaging. Because of their expanding operation, PGs wanted for more capital.

In marketing planting materials, the PG in Region XI had to provide allowance for mortality. To reduce this, the PG tried to improve its techniques and sell better quality planting materials (Table 5.15). The PG also lacked capital and, therefore, asked its members to plow back their dividends for capital buildup. The PG also borrowed some capital.

The market for planting materials is highly competitive so the PG had to maintain/improve the quality of planting materials. The PG in Central

Table 5.13. Comparative marketing efficiency of fruit marketing PGs and traders.

Item	Cagayan Valley				Southern Mindanao			
	Banana		Papaya		Mango		Durian	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Operational Efficiency								
Marketing cost	37	48	124	111	175	188	470	484
Spoilage	21	19	5	5	5	5	5	5
Pricing Efficiency								
Buying price	528	534	500	450	1,350	1,300	4,650	4,350
Selling price	617	609	650	625	1,650	1,650	5,250	5,200
Price ratio	1.17	1.14	1.3	1.39	1.22	1.27	1.13	1.2
Marketing margin	89	75	150	175	300	350	600	850
Financial Viability								
Net profit	52	27	26	64	125	162	130	366
ROI (%)	141	56	21	58	71	86	28	76

Table 5.14. Comparative marketing efficiency of seedling marketing PGs and traders.

Item	Southern Mindanao				Central Mindanao			
	Mango		Durian		Mango		Durian	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Operational Efficiency								
Marketing cost	199	184	299	284	199	184	299	284
Spoilage	5	5	5	5	5	5	5	5
Pricing Efficiency								
Buying price	1,200	1,200	3,500	3,000	1,200	1,000	3,000	3,000
Selling price	1,500	1,500	3,873	3,500	1,500	1,500	3,500	3,500
Price ratio	1.25	1.25	1.11	1.17	1.25	1.5	1.17	1.17
Marketing margin	300	300	373	500	300	500	500	500
Financial Viability								
Net profit	101	116	74	216	101	316	201	216
ROI (%)	51	63	25	76	51	172	67	76

Table 5.15. Marketing constraints and coping mechanisms of fruit PGs, 1992.

Region	Marketing Constraints	No. Reporting	Coping Mechanisms
Fruit Marketing			
II	Procurement:		
	No postproduction facilities	1	Did not store/ripen before selling
	Inadequate marketing knowledge	1	Actual observation of other practices
	Poor roads	1	Proper scheduling of sale
	Far distance from farm to market	1	Proper scheduling of sale
	Lack of transport facilities	1	Rented service truck
	Poor communication	1	Actual visit of trading center
	Financial:		
	Lack of funds	3	Negotiated for LBP loan
	Unwise use of loans	1	Assigned production technicians
XI	Procurement:		
	Highly perishable products	3	Proper handling
	Lack of storage facilities	3	Purchased cheap storage facilities
	Lack of transport	1	Buyer to pick up produce
	Pricing:		
	Highly competitive	3	Improved product quality
	Lack of working capital	2	Loans from LBP
Seedling Marketing			
XI	Procurement:		
	Allowance for mortality	1	Quality planting materials
	Capital:		
	Lack of working capital	1	Saved/Borrowed
	Management:		
	No control over personnel	1	Disciplinary sanction
	Pricing:		
	Highly competitive price	1	Improved product quality
XII	High seedling inventory at certain periods	1	Proper timing of seedling production Market promotion schemes
	Seedling quality	1	Selected quality on other plants
	Competition	1	Sold inventories at bargain prices

Mindanao faced high seedling inventory at certain periods so it had to exert more efforts in promoting its products. Seedling had to be produced at the right time. The seedling quality was, likewise, improved by acquiring quality mother plants. To cope with the increasing competition, the PG also provided bargains for their inventories.

Support Services Provided by Different Agencies

PGs depend on different agencies for support services (Table 5.16). CDA was particularly active in assisting the registration of PGs. It also conducted seminars on cooperative awareness and training on cooperatives management. Rural banks and government banks (LBP among others) provided seminars/training on loaning schemes, components, and policies); local government units (LGUs) improved, maintained or established infrastructures (farm-to-market roads); DA provided technical support, particularly on pest control for banana diseases; and DOST provided some materials for the nursery.

Benefits to Farmer-Members

Several benefits were derived by farmer-members. The quantifiable benefits included dividends, patronage refund, higher price of output, and interest on capital shares. Based on the total volume handled, PG members in Cagayan Valley received an estimated benefit of P83/ member per annum (Table 5.17). Because of the volume and number of fruits handled by PGs in Southern Mindanao, the benefit obtained by each member amounted to P3,337 per annum, while each PG member engaged in seedling marketing was provided P1,933 per annum. In the case of Central Mindanao, each member was provided an average of P1,333 per annum after the first year operation of the PG.

Comparison of Net Incomes of Members and Nonmembers

On a per hectare basis, farmer-members from Cagayan Valley earned an average annual farm income of P16,542, whereas nonmembers earned P23,583 (Table 5.18). In Southern Mindanao, farmer-members earned more from durian, banana, papaya, and mango production than nonmembers (per farm and per hectare bases).

Farmer-members from Mindanao earned more from durian seedlings than nonmembers (Table 5.18). In contrast, nonmembers earned more than the members from selling mango seedlings.

Table 5.16. Support services provided by different agencies, 1992.

Region	Agency	No. of PGs	Services Provided
Fruit Marketing			
II	CDA	3	Training, registration
	LBP	4	Financial, training
	LGU	5	Facilitate issuance of permit
	DTI	3	Training, price information
	SEC	1	Registration
XI	CDA	3	Training, registration
	LBP	3	Financial, training
	LGU	3	Facilitate issuance of permit Road network
	DTI	3	Training, price information
Seedling Marketing			
XI	DA	1	Provide parent materials Quality control Technical assistance
	CDA	1	Registration Training on coop management, policies
	DOST	1	Polythene bags for seedlings
	LBP	1	Loan
	LGU	1	Infrastructure/Road network maintenance
XII	DA	1	Technical assistance
	Rural Bank	1	Loan
	LGU	1	Issuance of permit
	CDA	1	Registration

Table 5.17. Benefits (in P) provided by PGs to farmer-members.

Benefit	Fruit Marketing				Seedling Marketing			
	Cagayan Valley		Southern Mindanao		Southern Mindanao		Central Mindanao	
	Total	Per Member	Total	Per Member	Total	Per Member	Total	Per Member
	Pesos							
Dividends	14,915	27	9,325	110	16,000	356	2,000	118
Patronage Refund	25,870	46	2,148	25	3,600	80	450	26
Differential Price of Output a/	200	4	268,659	3,161	60,970	1,355	19,000	1,118
Interest on Capital Share	3,203	6	3,462	41	6,400	142	1,200	71
Total	45,988	83	283,594	3,337	86,970	1,933	22,650	1,333

a/ Difference between PG and traders' buying prices and total volume handled.

Table 5.18. Comparison of net income from production of farmer-members and nonmembers (pesos/unit).

Item	Member			Nonmember		
	Per Farm	Per Hectare	Per Unit	Per Farm	Per Hectare	Per Unit
Fruit Marketing						
Cagayan Valley						
Banana	43,130	16,542	422	34,517	23,585	406
Southern Mindanao						
Durian	629,325	314,698	85	1,086,855	310,530	356
Banana	1,599,279	53,309	290	215,455	43,091	321
Papaya	141,308	56,523	26	63,462	18,141	64
Mango	523,114	177,371	125	629,855	176,530	162
Seedling Marketing						
Southern Mindanao						
Durian			2,062			1,855
Mango			1,050			677
Central Mindanao						
Durian			1,915			481
Mango			478			1,718

Training Activities, Meetings, and Evaluation on Services Provided

All farmer-members interviewed signified that they attended the general assembly meetings of the cooperative (Table 5.19). Members also enjoyed the higher-price privilege offered to them by PGs. On the whole, members were satisfied with their PGs.

Marketing Channel/Flow

Banana is produced as a backyard crop in Cagayan Valley and, therefore, banana marketing is not a big business compared with that in Mindanao (Fig. 5.2). Fruit marketing in the latter had local "strikers" or agents and traders and PGs operating at the barangay level (Fig. 5.3). Some members also sold to agents, wholesalers, and retailers within or outside their barangay and some directly to local or urban consumers. On the other hand, the marketing system for seedlings in Southern Mindanao was simpler than that for fruits (Fig. 5.4). The seedling market did not involve agents outside their barangay. The flow, likewise, indicated that farmer-members did not solely rely on the traders (46%) but more on the cooperatives (54%) (Fig. 5.5).

Conclusions and Recommendations

The fruit industry is considered to have a better potential than the other commodities in the agriculture sector. Durian, for instance, can be competitive considering that the peak production season in the Philippines does not coincide with that of the other Asian countries such as Malaysia and Thailand. This potential, however, could not be fully harnessed by mere production alone. The efforts should be geared to the whole industry including marketing. The present momentum of the fruit industry should, therefore, be backstopped by some alternatives to provide better benefits to the small producers.

One strategy that is being promoted is the strengthening of PGs as an alternative component within the marketing chain. The study, then, sought to describe and evaluate this option in the fruit industry.

Results showed that PGs are still at their infant stage and perhaps need more support in promoting for more membership. Fruit marketing PGs earned slightly lower net margin than traders apparently because they were paying a higher price to their members, but received the same price as the traders. Moreover, their marketing costs were also slightly higher primarily because they still do not have enough facilities as

Table 5.19. PG activities attended, reasons for selling the crop to coop, and number of farmers satisfied in PG services.

Activity	Cagayan Valley (n=28)	Southern Mindanao (n=13)	Central Mindanao (n=15)
Meetings:			
General assembly	100	100	100
12x per year	56		
11x per year	32		
10x per year	28		
Monthly meetings			
10 - 12		0	0
7 - 9		38	57
4 - 6		30	33
less than 4 times		32	10
Trainings/Seminars:			
Once 30	26	67	
Twice 28	46	33	
Thrice	32	20	0
4 times	0	8	0
Reasons for Selling to Coop:			
Higher price	29	65	67
Patronize coop	54	55	60
Convenience	48	0	0
Relatives are members	13	0	0
Credit tieup	31		
Good counting (measurement)	10		
Nearest outlet	3		
Satisfaction in PG Services:			
Financing	73	89	93
Procurement/Buying	53	100	100
Price information	44	100	100

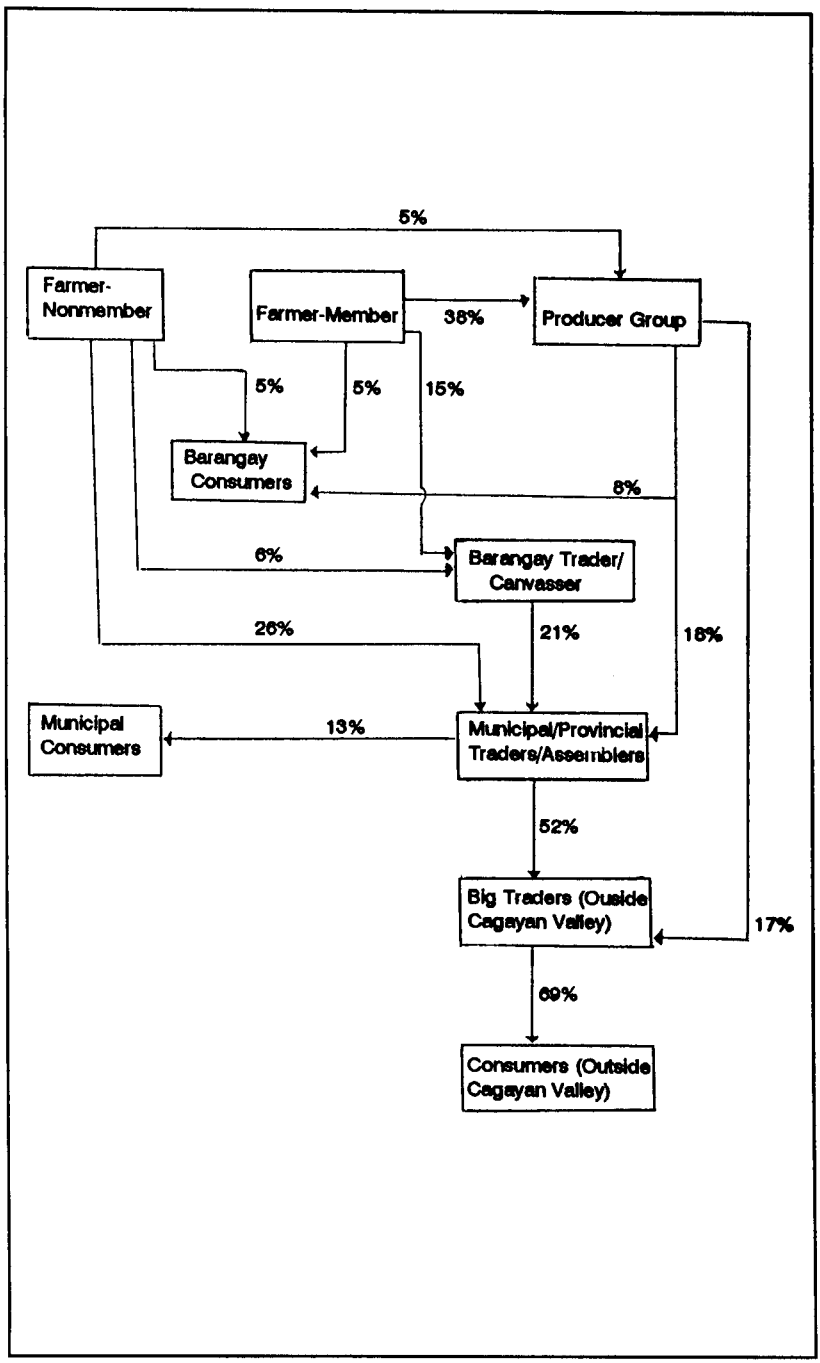

Fig. 5.2. Market flow of banana in Cagayan Valley.

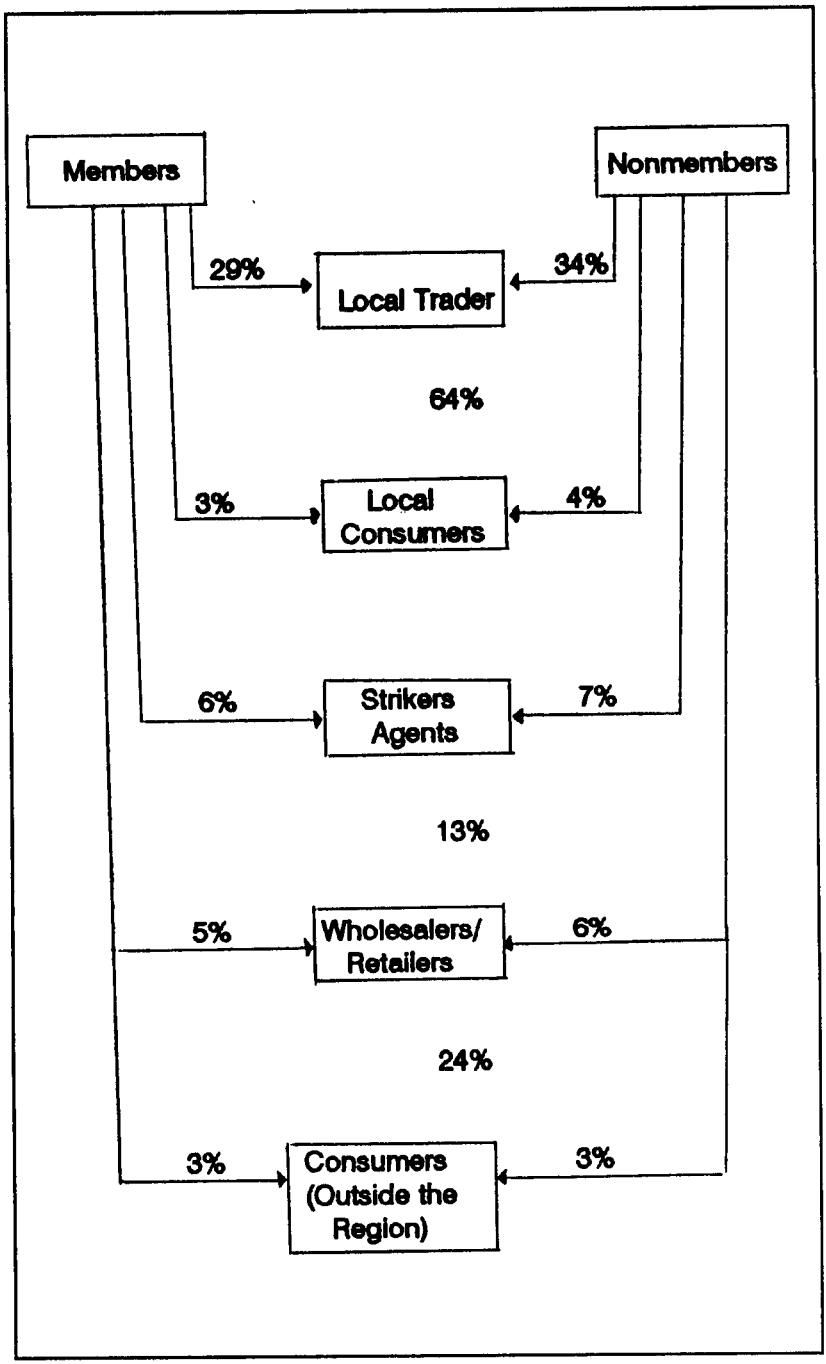

Fig. 5.3. Market flow of fruits in Southern Mindanao.

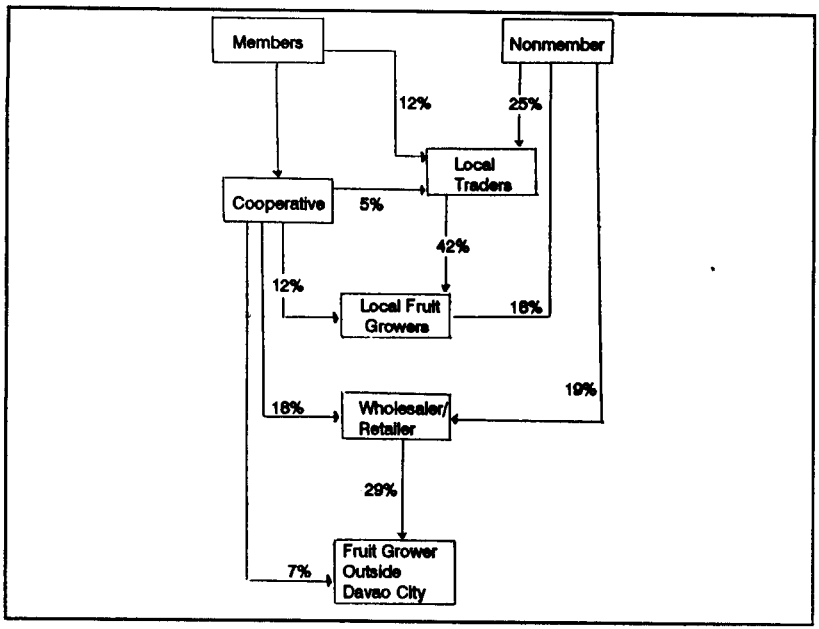

Fig. 5.4. Market flow of seedlings (fruits) in Davao City, Southern Mindanao.

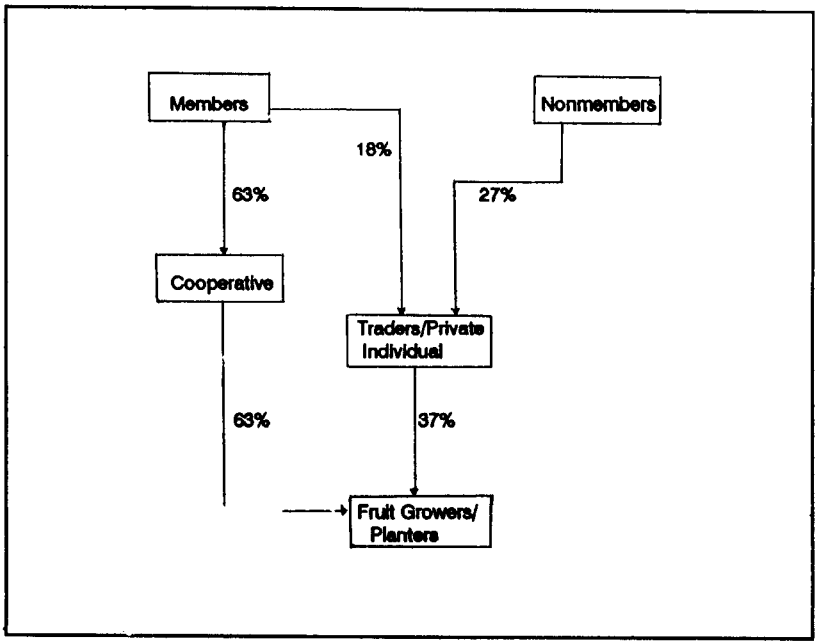

Fig. 5.5. Market flow of seedlings from members in Cotabato, Central Mindanao.

compared with traders. Most, if not all, cooperatives under study were multipurpose cooperatives. Some were handling only one commodity.

PG services were multifarious. Provided only in Cagayan Valley, processing is one component which needs to be reckoned by other PGs for their development and sustainability, especially that fruits are highly perishable and considering the fact that the fruit industry has been expanding rapidly.

The complementary roles of the fruit production and nursery cooperatives should be encouraged to enable the industry to insure the level of competitiveness of the produce. Product quality starts from the source and, therefore, the quality of planting materials is a vital factor to consider. Hence, government institutions responsible for the development/generation of improved varieties/clones should provide the necessary parent materials and technical knowhow to the nursery PGs. Likewise, to insure that planting materials sold to fruit growers are of good quality, accreditation of nurseries may be necessary. Moreover, the government should provide fund support for the improvement of indigenous varieties that are more resistant to pests and adapted to the local environments rather than adopting a borrowed technology/variety.

The relative efficiency of most PGs under study is quite encouraging, but there is still room for improvement. Almost all PGs have provided their members some benefits which can still be improved if PGs are given necessary support. Fruits are highly perishable and losses can be reduced through the improvement of farm-to-market roads and transport facilities. Moreover, postproduction technology necessary to improve product quality are not yet known to the majority of fruit growers, as well as PGs. Hence, the government agencies concerned should work with PGs in disseminating appropriate technologies for the purpose.

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Chapter 6

Marketing of Root Crops by Small Producer Groups in Eastern Visayas

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Introduction

Background

Root crop is one of the major commodities in Eastern Visayas (Region VIII). In 1990, Eastern Visayas ranked second only to Bicol Region in terms of area harvested of sweetpotato (Librero et al. 1992). Of the total area harvested of sweetpotato in the Philippines in 1990, 24 percent was accounted for by Bicol and 15 percent by Eastern Visayas. However, problems related to production, consumption, and marketing are still the major constraints to the development of the industry. Like most agricultural enterprises, the root crops industry remains atomistic with many small farmers cultivating an average of about 0.38 ha (Villanueva 1980; Alkuino 1991). Moreover, root crops producers in Eastern Visayas are primarily subsistence farmers who sell an average of about 35 percent of their total produce; the rest are retained for home use. This small portion of marketable surplus, combined with the small farm size devoted to root crops, makes the market more complicated for the commercial users and processors. Potential commercial and industrial users lament that even if root crops such as cassava and sweetpotatoes are used as raw materials for processing, they would not be able to secure a sustained volume necessary for a continuous operation because the farmers either bring their produce directly to the market in small quantities or sell directly to consumers. To serve the needs of the industrial users, root crops must

either be produced in plantation-type enterprises or the resources of the small producers must be pooled through a farmers' association.

Various agencies have intensified their campaign to form farmers' associations or cooperatives to hasten the transfer of the potential benefits of the new root crop technologies. Technology dissemination schemes are devised to integrate technology awareness, skills training, community organizing, production, cooperatives, entrepreneurship, and leadership. These activities were strengthened by financial support to farmers' associations and nongovernment organizations (NGOs). Low interest rate loans were offered by banking institutions such as the Development Bank of the Philippines (DBP) and the Land Bank of the Philippines (LBP), while other support services were provided by the Department of Trade and Industry (DTI), Cooperative Development Authority (CDA), and other government agencies.

All these thrusts have encouraged the formation of farmers' organizations and the establishment of agri-based livelihood projects to increase the income of the farmers. To strengthen farmers' associations, this research was undertaken to examine the marketing activities of the producer groups (PGs) and the constraints in the performance of such activities. Through this research project, the performance of the PGs can be evaluated and the possible agenda for action can be generated to maximize the income-generating potential of the root crops industry.

Statement of the Problem

The agricultural marketing system in the Philippines is still very inefficient. This inefficiency is due to several factors which, in Eastern Visayas, include the following: (a) absence or lack of infrastructure facilities contributing to the large marketing costs which eventually are reflected in the prices received by the farmers; (b) lack of market information which forces the farmers to sell to the most convenient buyer; and (c) ineffective implementation of marketing policies, especially in the rural areas.

The formation of PGs, either formally or informally can be viewed as a strategy to mitigate the impact of the less- efficient agricultural marketing system in the Philippines. NGOs are actively involved in the formation of the farmers' associations for various reasons, but the main purpose is to provide farmers and disadvantaged groups of the society a means of livelihood.

However, marketing efficiency of existing farmer organizations and rural-based marketing cooperatives has not been well-documented and analyzed. As an empirical exercise, one must determine and assess the implications of these farmer groups and/or marketing associations on

the economic well-being of farmers themselves. The magnitude of impact of relevant policies and programs, support services, and physical infrastructure on the performance and sustainability of these groups must be studied in-depth. Lastly, an analysis of the marketing problems and constraints must be able to detail some possible microlevel solutions, as well as recommend appropriate macropolicies and development programs aimed at improving cooperative marketing in the Philippines.

Objectives

The study aims to analyze the performance of various PGs and rural-based farmer organizations engaged in marketing root crops in Eastern Visayas.

Specifically, the objectives of the project are to:

1. provide an overview of the production-marketing-consumption systems of root crops in the region;
2. determine and analyze the various marketing services performed over time by PGs in root crops;
3. evaluate and compare the marketing efficiency of these organizations with alternative marketing channels;
4. identify and determine the effects of existing support services and other related infrastructure and policies on PGs;
5. evaluate the impact of these PGs on the social and economic well-being of the farmers;
6. analyze the various marketing constraints and problems and determine the PGs' coping mechanisms;
7. recommend some policy agenda/actions to improve the overall performance and economic efficiency of these PGs; and
8. develop possible research-policy linkages to enhance utilization of research results.

Conceptual Framework

Review of Related Studies

Current information shows that Eastern Visayas still predominates in terms of area and production of root crops in the Philippines (Librero et al. 1992). Next only to coconut and abaca, cassava and sweetpotatoes ranked third and fourth, respectively, in area planted in Eastern Visayas (NSCB 1992). The root crops industry in the region, however, is characterized by a large number of small farmers cultivating an average

of about 1.8 ha, with only 0.38 ha devoted to root crops (Alkuino 1991). If these small farmers are expected to play an important role in commercializing the root crops industry, they have to be organized into a group that could supply a sustained volume of raw materials for the processing sector. Such organization would also enhance market power.

The establishment of cooperatives was one of the earlier attempts to institutionalize improvements in agricultural marketing in the form of stronger bargaining position related to pricing of the products, purchase of inputs, acquisition of capital, and other marketing arrangements (Sandoval 1983). This move reflected a policy goal of the government to modify the agricultural product market structure through cooperatives with credit and tax-free incentives.

Like the producers of most agricultural commodities, the root crops farmers face various production and marketing related problems. In production, Palomar (1988) reported that the national average yield of cassava was 7.94 mt/ha in 1987. This yield is considerably low because cassava is usually grown in marginal lands. In a commercial plantation, cassava yields 23.36 mt/ha. The study of Manuel (1978) indicated that low yield was attributed to several factors such as the nonapplication of fertilizer by most farmers. Farmers consider cassava as a secondary crop and, therefore, give secondary attention to the crop in using technology and allocating capital.

In marketing, several studies (Alkuino 1991; Villanueva 1980 and Pascual 1977) have shown that the majority of the root crop farmers are subsistence producers and generate only little marketable surplus. Only very few are commercial producers. Other market-related problems include inefficient transport facilities, irregularity of supply, and lack of farm-to-market roads (Tisang 1979). In processing, large flour and feed millers hesitate to use root crops as a raw material because of unsustained supply of fresh roots (Alkuino 1991). Villanueva (1979) also cited this as a reason why millers have an irregular processing schedule. Considered as a problem by some sectors, the very low price of fresh roots discourages farmers to produce more cassava. According to Binongo (1985), low price of cassava roots hurts the producers in the food market because cassava food demand is price inelastic. However, rapid increase in cassava demand in the feed and starch markets as the price of fresh roots falls tends to offset producer losses. Indirectly, falling prices still benefit the producers through the starch and feed markets. Falling prices in the fresh market, if accompanied by increase in cassava demand by feed and starch processors, tend to increase total revenue accruing to the producers. To maximize these benefits among farmers considering that price of cassava roots are low, a cost-reducing technology has to be developed.

Methodology

This study focuses on the marketing of cassava and sweetpotatoes because of their relative importance in Eastern Visayas. The minor root crops such as tugui, taro, yam, and others were excluded not only because of the lack of data, but also because they were not widely traded in the market.

Data Gathering

Both primary and secondary data were used in the study. Sources of the primary data were farmers, traders, and key informants. Secondary data were taken from various offices such as the Bureau of Agricultural Statistics (BAS) of the Department of Agriculture (DA), DTI, National Economic and Development Authority (NEDA), National Statistics Office (NSO), and the Office of the Municipal Mayors for statistics of the community. Research reports of the Philippine Root Crops Research and Training Center (PRCRTC), the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), and the National Agriculture and Fishery Council (NAFC) were also used to provide an overview of the cassava and sweetpotato industry.

Sample Scheme

Purposive sampling was made on the seven known root crop farmer associations in Eastern Visayas. The five known root crop PGs performing marketing-related functions were completely enumerated. Later, as the study progressed, it was discovered that two new farmer associations were formed, but these new ones were excluded in the study. Traders were also completely enumerated since there were only 22 of them. Farmer-members of PGs were completely enumerated for associations with less than 20 members. For those with more than 20 members, farmer-respondents were selected at random. Sample farmers for each association numbered 20, except for PG4 and PG5. Only eight and nine sample farmer-members were selected from PG4 and PG5, respectively, because for registration purposes, husband and wife were listed as members. Nonmember-farmers were also sampled at least 50 percent, but not to exceed 100 percent of sample members.

Of the five PGs in the study, two are located in Southern Leyte and three in Leyte. The PGs include one each in the municipalities of Macrohon (PG1) and Maasin (PG2) in Southern Leyte, a multipurpose cooperative in Capoocan (PG3), a producers' association in Baybay (PG4), and a rural improvement club in Cabatoan (PG5) of Dulag, Leyte.

The number of sample respondents by PG is presented in Table 6.1. Take note that PG4 and PG5 had only eight and nine sample farmer-members, respectively. PG4 actually had 15 members with both husband and wife as members. Only one of each couple was taken as respondent. Similarly, PG5 had a total membership of 20 farmers. The locality of PG1 did not have a trader. Products were directly bought by a feed mill from another province who used the dried cassava chips as raw material for hog feeds. The feed mill cannot serve as a sample trader because its business activities were different from the PG and the rest of the sample traders.

Table 6.1. Distribution of sample respondents by PG, Eastern Visayas.

Item	PG1	PG2	PG3	PG4	PG5	Total
No. of PG	1	1	1	1	1	5
No. of Farmer-Members	20	20	20	8	9	77
No. of Farmer-Nonmembers	10	10	10	10	6	46
No. of Traders	0[a]	6	5	5	6[b]	22

[a] No root crop traders were found in the locality. The only buyer of PG1 products was VISCA Feed mill located in Baybay.
[b] Include five from Tacloban City.

Problems were encountered in ascertaining the number of PGs, traders, and farmers at the municipal level. Foremost among the problems was the fact that PGs and cooperatives listed by the regional offices of the CDA, the Department of Labor and Employment (DOLE), and the DA were simply indicated as multipurpose cooperatives with no reference to commodities handled and functions performed. Based on the lists provided by the abovementioned offices, attempts were made to visit each town and asked the Municipal Agricultural Officers (MAOs) to identify the PGs dealing with root crops. Efforts were time consuming and expensive. Instead of visiting each town, only few key informants were used who can identify PGs. PGs identified were subsequently visited by the study teams.

A similar problem was encountered in determining the exact number of root crop traders in the region. The trader problem was even more difficult because of the tentative nature of the activity. This means that root crops trading may be an activity of a particular trader now, but not the following year. This is because root crops trading is only a secondary activity of traders.

Empirical Findings

Description of the PGs

Most of the rootcrops PGs covered by this study originated when the root crops technology of ViSCA started to be known in the region. It was not accidental, therefore, that all PGs received some form of technical assistance or training from the institution. This development together with the Livelihood Enhancement and Development (LEAD) program of the government induced the farmers to organize themselves into associations.

PG1 was established in 1989 to go into root crop production and processing of dried cassava chips. From the interest-free loan of P25,000 from LEAD as initial capital, the association reloaned some amount to the members to develop their cassava farms. Technical assistance was also secured from the DA and ViSCA to establish a processing plant. An informal agreement was made between PG1 and ViSCA Feed mill to sell any amount of dried cassava chips the PG can produce. However, cassava chips were produced only during the summer or from April to September. In Table 6.2, the PG1 capitalization decreased from P25,000 to P17,816. This was so because PG1 used the P25,000 loan from LEAD as its capital. At the time of the study, PG1 paid LEAD P7,184, hence, the standing balance served as its current capital.

To provide supplementary income, PG2 was formed in 1986 originally to produce laundry soap with a very minimal initial capital of P300 to buy the ingredients. When the soy sauce factory was established in the locality, PG2 members shifted their interest and major activity to the production of sweetpotatoes to be used as raw materials for soy sauce making. As a group, however, PG2 was not involved in root crops production and marketing. Its role was to establish the linkage between its members and the soy sauce factory. This was made possible because PG2 was a member of the Farmers' Federation which managed the factory. The factory assures a market for the farmer-members' produce. The individual members sold and delivered their products directly to the soy sauce plant.

PG3 is a relatively new association. Established in 1992, it produced and sold fresh cassava as one of its several income-generating projects to increase capital and provide additional income for its members. For this purpose, PG3 rented a 2-ha communal farm and pooled its members' resources such as planting materials and labor for land preparation, planting, and weeding. Harvesting and transporting were usually done by the traders.

Table 6.2. Characteristics of small PGs, Eastern Visayas.

Characteristics	PG1	PG2	PG3	PG4	PG5
Nature/Function	Processing cassava chips for feeds Financing	Production of sweetpotato Financing	Production of fresh cassava	Production and processing of cassava and sweetpotato	Processing of sweetpotato chips
Location	Macrohon, Southern Leyte	Maasin, Southern Leyte	Capoocan, Leyte	Baybay, Leyte	Dulag, Leyte
Year Established	1989	1986	1992	1989	1990
Capitalization (P)					
Initial	25,000	300	1,782	1,680	119
Current	17,816	2,000	3,370	35,855	1,313
Membership (P)					
Initial	25	52	37	15	20
Current	30	52	37	15	20
Coverage					
Members	30	52	37	15	20
Nonmembers	5	8	0	0	0
Registration	CDA	CDA	CDA	CDA, DOLE, DTI	CDA
Annual Net Income (P)	3,072	1,500	4,000	95,094	1,313

PG4 and PG5 are basically food processors of cassava and sweetpotatoes, respectively. PG4 was formed in 1989 with the active assistance of ViSCA initially to produce cassava chippy as a snack food. Taking the stand of minimum interference, ViSCA left the group, except to give technical assistance in the production, processing, and quality control of the chippies. Pressed for capital to build its processing plant, PG4 decided to initially produce cassava choco-roll, the technology for which was previously learned from ViSCA. Later, cassava choco-roll became the main product of PG4 and the "cassava chippy" as a secondary product. The association put up a small processing plant in the village where members regularly worked at least four times a week. They took turns in harvesting their fresh tubers for processing. When the members ran out of supply of fresh tubers, the association bought from the nonmember growers in the village or nearby villages.

Finished products were marketed by members to different schools of Baybay and Tacloban City. In turn, they received a 30 percent commission. Orders were also accepted from customers from different places.

PG5 is one of the many Rural Improvement Clubs (RICs) in the country which is active in processing ready-to-eat sweetpotato chips. The association started its processing activity in 1990 after undergoing a training conducted by ViSCA. It did not have its own sweetpotato farm, but bought its raw materials from the farmers, usually the husband of the members. The group had a processing center in the barangay equipped with simple processing implements such as slicer, stove/oven, big carajay, and a weighing scale provided by ViSCA. Processing was on order basis. In the beginning, the group processing activities were voluntary. The 20 members were divided into groups to process a particular order. Because the members were not paid for their labor, some did not participate anymore. To solve the problem, one or two available members within the vicinity would be called to process chips when needed, but were paid for their services.

Products were either delivered or picked up by the buyers. The usual buyers were government agencies, especially the DA when there were trade fairs and special occasions.

Profile of Sample Municipalities

Of the five PGs included in the study, two were located in Southern Leyte and three in Leyte. The PG1 and PG2 are both located in Southern Leyte. PG1 was established in a barangay which is about 4 km from the national highway and accessible to all kinds of land transport. The municipality is relatively small with about 20,416 population (NSCB

1992) and a total land area of 7,470 ha (NSO 1992) (Table 6.3). Of the total land area, 3,498 ha are devoted to crop production.

PG2 is located in an interior barangay and about 7 km from the town proper of Maasin, the capital town of Southern Leyte. It can be reached by a few public utility buses and jeepneys on an unpaved provincial road, but serviced regularly by motorcabs. Maasin has a population of 64,696 and a total land area of 19,780 ha, of which 9,385 ha are devoted to crops.

PG3 is located between two barangays of the town of Capoocan, Leyte. These two barangays are along the national highway and about 24 km from the town proper going southwest to Ormoc City. The town of Capoocan is relatively small with a population of 23,687.

PG4 is located in an interior barangay in Baybay, Leyte. The barangay is about 4 km from the town proper and about a kilometer of gravel road from the main highway. The municipality of Baybay has a population of 82,281 with a total land area of 46,050 ha. About 50 percent (22,815) of the total land area is devoted to crops, but only about 257 ha are utilized for root crops.

PG5, an organization composed mostly of rural women, is situated in Dulag, Leyte. The barangay is about 2 km from the provincial road and about 12 km from the town proper of Dulag. One of the smallest municipalities of Leyte, Dulag has a population of 18,658 with a total land area of 8,683 ha. About 81 percent (7,069 ha) of the total land area is devoted to crops (MDP, 1993-1998). The municipality of Dulag is about 34 km south of Tacloban City.

Table 6.3. Profile of sample municipalities, Eastern Visayas.[a]

Item	PG1	PG2	PG3	PG4	PG5
Town	Macrohon	Maasin	Capoocan	Baybay	Dulag
Population	20,416	64,694	23,687	82,281	33,020
Crop Area (ha)					
Root crops	311	698	1,228	257	187
All crops	3,498	9,385	2,478	22,815	7,069
Production (mt)					
Cassava	27	124	588	120	nad
Camote	424	960	689	557	144
Number of PGs	3	3	1	1	1
Number of Traders	0	6	5	5	6
Number of Farmers					
Root crops	990	2,729	1,887	1,390	215
Other crops	1,121	4,934	3,487	14,666	3,140

[a] Source of Data:
Provincial Profile of Southern Leyte 1992. NSCB 1992.
Municipal Development Plan of Dulag 1993-1998.
Municipal Development Plan of Baybay 1993-1998.

The Production-Marketing System

The role of the PGs in the production-marketing continuum varied depending upon the nature and functions of the PG. Fig. 6.1 shows that PG1 performed the processing role. It absorbed most (92%) of the members' fresh cassava produce and processed these to dried cassava chips for feeds, especially from April to September. The rest of the members' produce were sold directly to consumers. After processing, PG1 sold practically all (98%) of the dried cassava chips to a feed miller in another province to be used as raw material for hog feeds. The rest were sold to backyard swine raisers in the village.

About three-fourths of the fresh cassava produce of the non-members were sold directly to the consumers in the village. Only a small portion (27%) was sold to the PG.

PG2 did not have any role in the actual movement of the fresh sweetpotatoes going through the marketing chain, except to serve as an initial link between its members and the processing plant in the village.

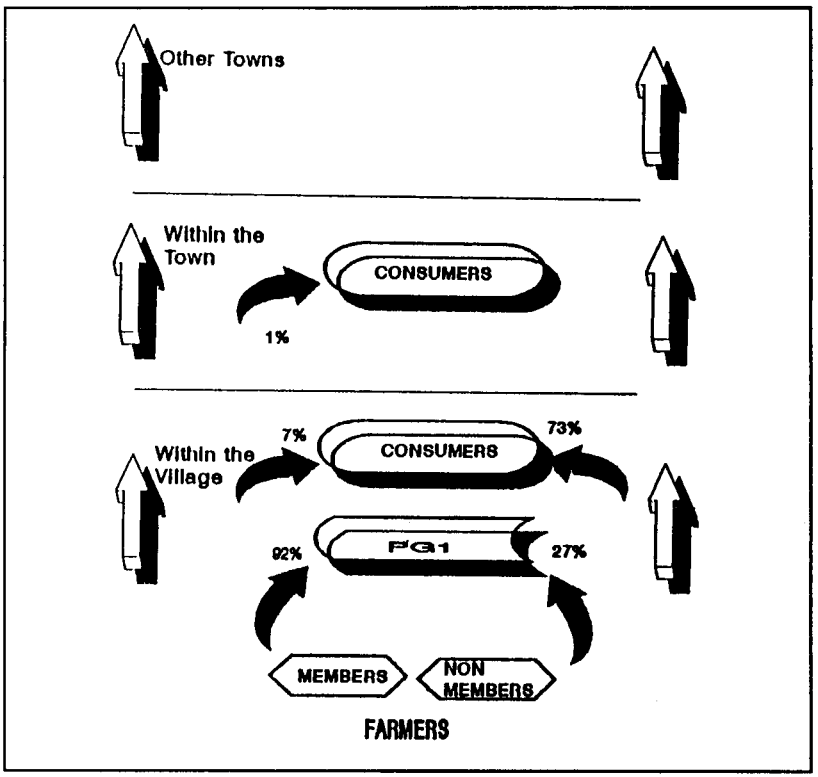

Fig. 6.1. Marketing channel of fresh cassava in PG1.

As shown in Fig. 6.2, PG members produced sweetpotatoes and sold about two-thirds directly to wholesalers from another town. Some 18 percent were bought by local agents and another 10 percent were sold directly to consumers. Only 8 percent of the members' fresh produce were absorbed by the soy sauce plant in the village because of its limited capacity.

About one-half of the nonmembers' produce were sold to the wholesaler-assemblers in town and the rest directly to the consumers.

The role of PG3 in the production marketing continuum was simply that of cassava producer. It embarked in cassava production as one of the several income-generating projects of the PG to generate additional capital and income for the members. PG3 rented a 2-ha communal farm for the purpose. It did not buy from any farmer-members or nonmember. The fresh cassava produced by PG3 was sold mostly (74%) to the wholesalers from another town who supplied the raw materials to dried cassava processors (Fig. 6.3). These wholesalers usually harvested the fresh roots from the farmers' field, a practice which lessened the marketing cost of the producers.

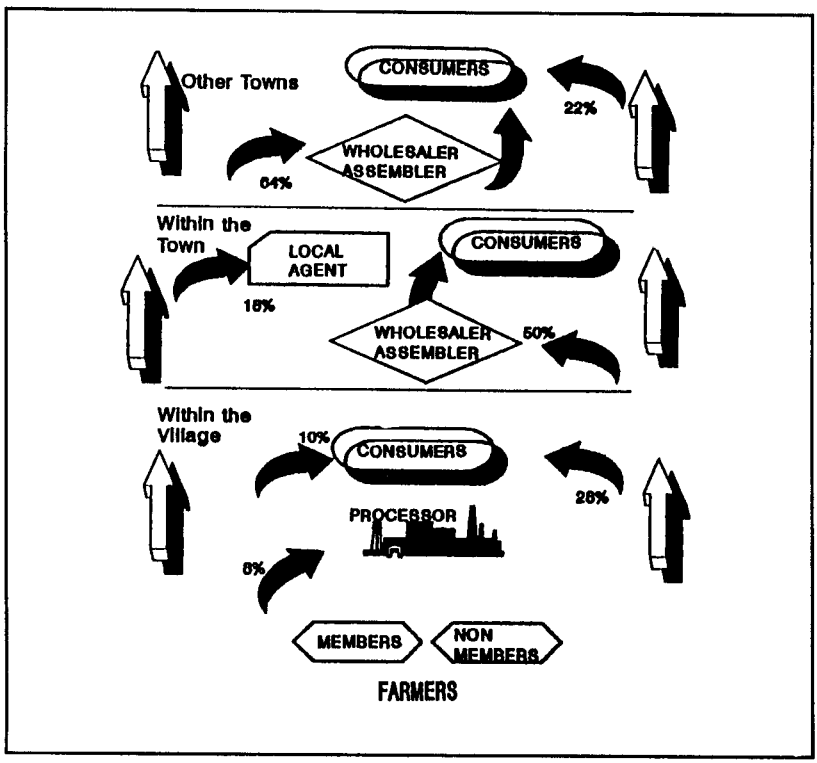

Fig. 6.2. Marketing channel of sweetpotatoes in PG2.

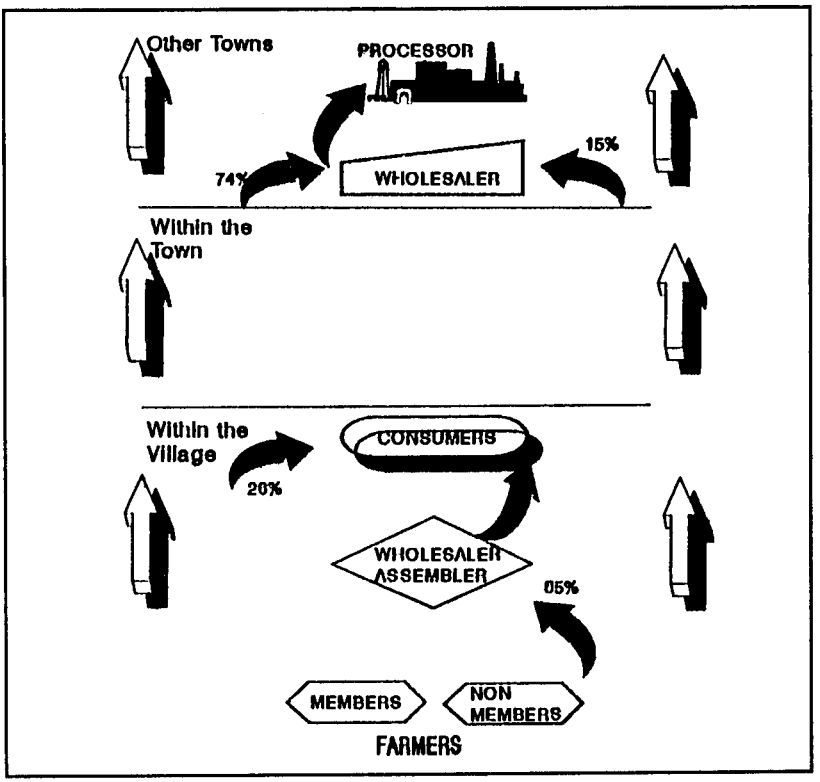

Fig. 6.3. Marketing channel of fresh cassava in PG3.

PG3 did not embark on harvesting and marketing their fresh roots for reason of convenience. PG3 relied mainly on the pooled resources of the members to operate the communal farm.

About 85 percent of the nonmembers' produce were sold to a wholesaler-assembler in the village; the rest to wholesalers from another town.

PG4 processes the fresh cassava it bought from the farmers into food items such as choco-roll and chippy (Fig. 6.4). Finished products were then sold to consumers and town traders.

About 66 percent of the fresh cassava produce of the members were sold to the PG and another 29 percent were sold to retailers within the municipality. The rest were sold to a local agent supplying the needs of the wholesalers. During the lean months when there was insufficient supply of raw materials, the fresh roots were supplied by nonmembers who sold about 31 percent of their produce to the PG. The rest were distributed to wholesalers, retailers, and consumers.

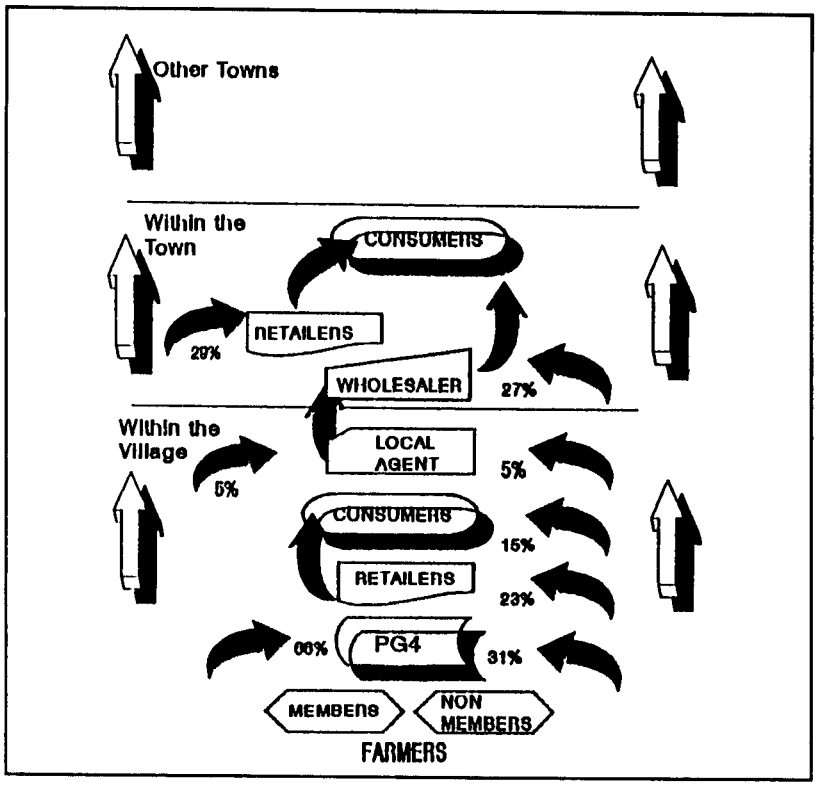

Fig. 6.4. Marketing channel of fresh cassava in PG4.

Another food processing group, PG5, manufactures chips from sweetpotatoes. Whenever it received an order, PG5 secured fresh sweetpotatoes either from the members or nonmembers. As shown in Fig. 6.5, the PG bought only about 17 percent of the members' fresh produce. More than one-half of its output was sold to wholesalers within the municipality. The rest were sold directly to consumers. The fresh produce of the nonmembers were sold to retailers and wholesalers in a 55:45 ratio.

Farmer's Attitude Towards the PG

The majority of farmer-members joined the PGs because of the opportunity to increase their income through their participation in the livelihood projects of the organization (Table 6.4). In PG2, most members claimed they joined the group because they were assured of a market for their produce. Analysis, however, showed that members

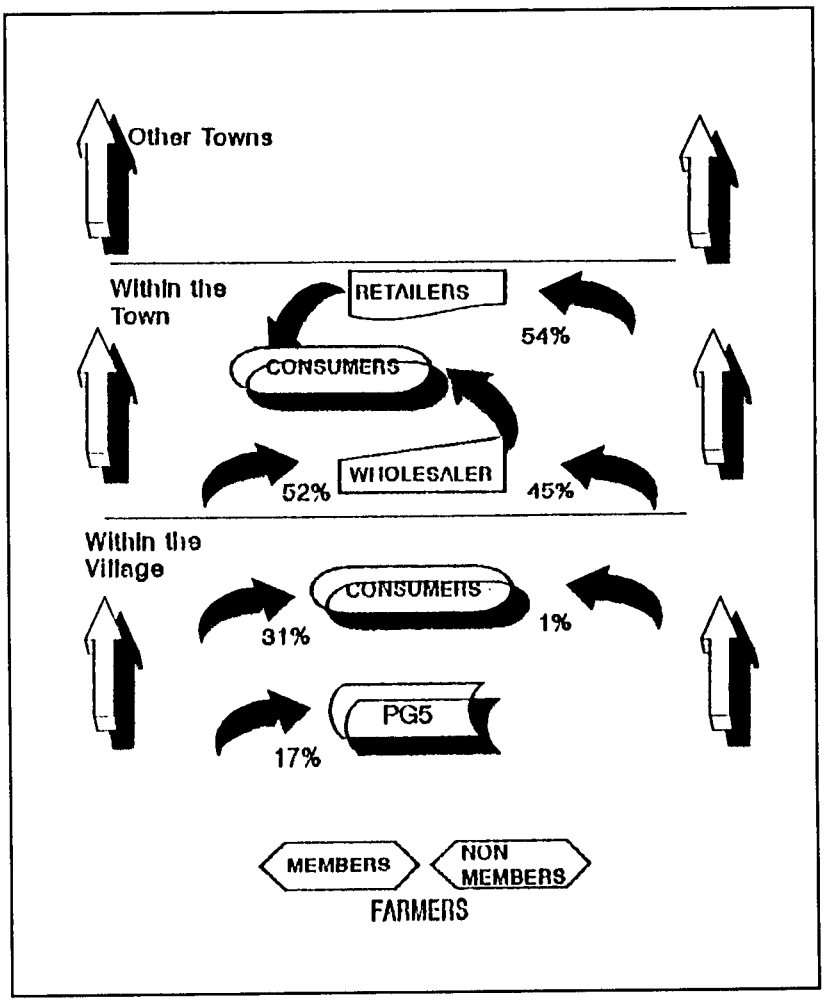

Fig. 6.5. Marketing channel of sweetpotatoes in PG5.

were assured of only 8 percent of their produce bought by the processor being linked by the PG as shown in Fig. 6.2. To express their support to the PGs, farmers in general attended meetings and supported the projects of the organization. The majority of members (57%) realized that PGs had a great potential to generate additional income for the household. The other 43 percent commented that PGs will have a greater potential to succeed if members will work and cooperate with each other.

Table 6.4. Farmer's attitude toward PGs, Eastern Visayas.

Item	PG1	PG2	PG3	PG4	PG5	All PGs
Number Reporting	20	20	20	8	9	77
			Percent			
Reasons for Membership						
To increase income	70	30	85	88	67	65
Assured market	15	60	0	12	0	21
Enrich coop knowledge	15	10	15	0	33	14
Ways of Supporting the PG						
Attendance in meetings	25	90	25	25	56	45
Support PG activities	55	10	75	62	44	48
Sell product to PG	20	0	0	13	0	6
Comments on Potential of PG						
Great potential if there is unity among members	60	25	55	25	33	43
Gives additional income	40	75	45	75	67	57

Marketing Operations and Services

Marketing services performed by PGs and traders

Differences existed among the PGs because of the difference in the products handled and in the major activities performed. Some handled only fresh roots, while others processed the fresh roots. These differences explain the variation in the marketing services performed among PGs and between PGs and traders.

Table 6.5 shows the marketing services performed by PGs and traders. Two of the PGs (PG2 and PG3) did not procure fresh roots from the members. PG2, in fact only provided financial support and served as an initial link between the members and the soy sauce plant. It did not perform production and marketing functions. PG3 produced fresh cassava from the communal farm and performed the trading-related functions, especially wholesaling. It did not buy products from the members. The other PGs which processed the fresh roots into other products performed more functions such as procurement of fresh roots, drying, processing, storing, transporting, and contacting buyers.

Likewise, according to the functions performed, traders were of two types, (a) those who processed the fresh roots (a trader in the locality of PG2) and (b) those who did not process (traders in the localities of PG3, PG4, and PG5). Traders were mostly middlemen who bought fresh roots from the farmers or PGs and sold the produce to other traders or directly to the consumers. Some traders retailed their goods directly to the

Table 6.5. Marketing services performed by PGs and traders, Eastern Visayas.

Marketing Services	Macrohon[a]	Maasin[a]		Capoocan[a]		Baybay[a]		Dulay[a]	
	PG1	PG2	Traders	PG3	Traders	PG4	Traders	PG5	Traders
Number Reporting	1	1	6	1	5	1	5	1	6
Procurement	P	NP	P	NP	P	P	P		P
Drying	P	NP	P	NP	P	P	P	NP	NP
Processing	P	NP	P	NP	NP	P	NP	P	NP
Grading	NP	NP	P	NP	NP	P	NP	NP	P
Storing	P	NP	P	NP	P	NP	P	NP	NP
Transporting	P	NP	P	NP	P	P	P	P	P
Financing	P	P	NP	P	NP	NP	NP	NP	P
Contact Buying	P	NP	P	NP	NP	NP	P	P	NP
Wholeselling	P	NP	P	P	P	P	P	P	P
Retailing	NP	NP	P	P	P	P	P	P	P
Market Information	NP	NP	P	P	NP	P	NP	NP	NP
Linkaging	P	P	P	P	NP	P	NP	P	NP
Market Promotion	NP	NP	P	NP	NP	P	P	P	NP
Technical Support	P	NP	NP	P	NP	P	NP	P	NP

[a] P - Performed .
NP - Not performed.

consumers in the public market. No trader performed the financing function, except for one in the location of PG5 who loaned money at no interest to the farmers. Traders who processed the fresh roots usually performed more functions than those who did not. These functions included grading of fresh tubers, market information, and linkaging. Market information mainly involved provision of price information and sources of supply. Linkaging, on the other hand, involved the establishment of contact of support groups or agencies that could help the PGs attain their goals and objectives.

Buying and selling arrangements of PGs and traders

Table 6.6 shows the buying and selling arrangements of PGs and traders. Three out of five PGs studied bought fresh cassava or sweetpotato to be used either as raw material for processing or for trading, except for PG3 which had a communal farm. PG2 was not involved at all in buying and selling of root crops. The PG processors (PG1, PG4, and PG5) usually purchased fresh roots from both members and nonmembers on delivered basis. PG4 also picked-up products from the farm. Products were bought in cash, except for PG1 and traders in the locality of PG2 who gave cash advances to farmers.

PG processors sold their produce in the form of dried cassava chips for feeds (PG1), cassava chippy and cassava choco-roll (PG4), and sweetpotato chips (PG5). PG3 sold its produce from the communal farm in fresh form. All transactions were on cash basis.

Comparative marketing operations

The heterogeneity of the marketing activities posed a big problem in generating a meaningful comparison between PGs and traders. A slight similarity in the marketing activities could only be found between PG3 and the corresponding traders. Although PG3 did not buy fresh produce, both the PG and the traders handled fresh cassava tubers. The rest handled different forms of root crop products.

In Table 6.7, several items included in the analyses need explanation as the items were used selectively under specific situations. Processing cost specifically applies to PG processors (PG1, PG4, and PG5). It refers to the cost of direct labor and materials used in converting fresh roots to primary products. Production cost applies only to PG3 where the production cost was used as a surrogate variable of the buying price to be able to determine the marketing margin. The effective buying price as applied to PG processors refers to the buying price of fresh roots plus

Table 6.6. Buying and selling arrangement of PGs and traders, Eastern Visayas.

Item	Macrohon	Maasin		Capoocan		Baybay		Dulay	
	PG1[a]	PG2[b]	Traders	PG3	Traders	PG4	Traders	PG5	Traders
A. Buying									
Form of Product	Fresh cas	na	Fresh sp	na	Fresh cas	Fresh cas	Fresh cas/sp	Fresh sp	Fresh cas/sp
Mode of Procurement									
Picked-up									
Delivered	x	na				x		x	
Both			x		x	x	x		x
Mode of Payment									
Cash									
Credit					x	x	x	x	x
Cash advance									
Combination	1,3	na	1,2						
B. Selling									
Form of Product	Dried Chips	na	Fresh sp	Fresh cas	Fresh cas	Procsd food	Fresh cas/sp	SP chips	Fresh cas/sp

Table 6.6. (Continued).

Item	Macrohon	Maasin		Capoocan		Baybay		Dulay	
	PG1[a]	PG2[b]	Traders	PG3	Traders	PG4	Traders	PG5	Traders
Mode of Selling									
Picked-up	x	na		x					
Delivered									
Both			x		x	x	x	x	x
Mode of Payment									
Cash	x	na	x	x	x	x	x	x	x

[a] No trader in the locality; trader located in another province who bought dried cassava chips as raw material in the manufacture of hog feeds.
[b] Not invoved in buying and selling of members' produce. Members individually sold to the soy sauce plant.
[c] Include cassava choco roll and cassava chippy.

sp - sweetpotato
cas - cassava
na - not applicable
x - arrangements followed
1,2 - mode of payments 1 and 2

Table 6.7. Comparative marketing operations of PGs and traders, Eastern Visayas.

	Capoocan	Maasin	Capoocan		Baybay		Dulay	
	PG1[a]	Trader[d]	PG3[b]	Trader	PG4[c]	Trader[c]	PG5	Trader[d]
Volume Handled (kg.)	9,170	476	6,600	16,920	8,528	3,924	232	30,600
Selling Price(P/100 kg)	165	740	66	167	3,750	233	3,750	498
Buying Price(P/100 kg)	60	600	0	88	200	184	250	262
Processing Cost	34	na	na	na	1,500	na	684	na
Production Cost	na	na	27	na	na	na	na	na
Effective Buying Price	94	na	27	na	1,700	na	934	na
Marketing Margin (MM)	71	140	39	79	2,050	49	2,816	236
Marketing Costs (MC in P/100 kg)								
Transport	0	2	0	3	0	3	0	1
Shrinkage and spoilage	0	0	0	0	0	0	5	13
License fees	1	0	2	6	1	0	43	3
Labor and materials	34	38	0	15	1500	1	684	6
Depreciation	1	1	0	0	35	-	38	1
Commission	0	0	0	0	1125	0	0	na
Other fees/interest	0	0	0	10	0	1	0	10
Total MC	36	41	2	34	2661	5	770	34
Total Cost (TC) e	96	641	29	122	2861	189	1020	296
Net Profit (NP)	69	99	37	45	889	44	2730	202
MC as % of MM	50.7	29.29	5.13	43.03	129.8	10.2	27.34	14.41
NP as % of TC	71.88	15.44	127.59	36.88	31.07	23.28	267.65	68.24

na - Not applicable.
[a] Involved with one trader only from another province, the feed miller who bought its product used it as raw material for hog feeds.
[b] For fresh cassava only.
[c] For cassava choco roll only.
[d] For sweetpotato only.
[e] Include marketing cost plus buying price.

the processing cost. Applied to PG3, it is equivalent to the production cost of fresh roots as PG3 did not buy from the farmers. This procedure of proxy assignments may have been subjected to questions, but was used to determine the marketing margin in the absence of other proxy indicators.

It could be seen in Table 6.7 that while the net profit of PG3 per hundred kilograms was lower than that of the traders, the net profit as percentage of the total cost was very much higher because of the minimal marketing cost incurred by the PG. In general, net profits as percentage of total cost accrued to PGs were higher than those of the traders.

Marketing Efficiency

The efficiency of the marketing system as a mechanism to maintain coordination between production and consumer demand is difficult to monitor and measure. In practical terms, the marketing system is efficient when the products are available to the consumers at the right time, place, and form and at the least possible cost.

Buying prices of PGs and traders

In general, prices of cassava and sweetpotato did not vary much between the PGs and traders, but varied greatly among places. PG1 purchased fresh cassava at P60/kg which was more than three times lower than the price of P200 paid by PG4 (Table 6.8). This location price variation could be reflective of the supply and demand situation for the product in the area. PG1 is in Southern Leyte where the population to root crop area ratio was very much lower than at PG4 in Leyte. Between PGs and traders, buying prices varied slightly. In Leyte, for instance, where PG4 is located, traders purchased fresh cassava at P184/100 kg compared with the PGs at P200 or a difference only of P16. There was no difference in the selling prices between members and nonmembers, except in PG4 where farmer-members sold their produce at P200 to the PG compared with the non-members price of only P180. This price premium was given as a privelege of being a member of the PG.

Monthly selling prices of PGs and traders

The monthly selling prices of PGs and traders are presented in Table 6.9. Over time, the monthly selling prices of PGs were relatively constant. Selling prices of traders, however, exhibited some variations depending on the harvest season. For instance in PG2, the selling price of the traders ranged from P600/100 kg in October to P900/100 kg in

Table 6.8. Average buying prices of PGs and traders, and selling prices of farmers, Eastern Visayas.

Item	PG1	PG2	PG3	PG4	PG5
Buying Price (P)					
PG					
Fresh cassava	60	na	na	200	na
Fresh sweetpotato	na	na	na	na	250
Dried cassava chips	280	na	na	na	na
Traders					
Fresh cassava	na	na	88	184	109
Fresh sweetpotato	na	300	na	407	262
Selling Price (P)					
Farmer-members					
Fresh cassava	60	na	na	200	na
Fresh sweetpotato	na	280	na	na	250
Farmer-Nonmembers					
Fresh cassava	60	na	60	180	na
Fresh sweetpotato	na	280	na	na	250

na - not applicable.

July and August. The high price in July and August corresponded to the middle of the growing period of sweet potatoes which were mostly planted at the onset of the rainy season in May or June.

In PG3, the price of fresh cassava varied slightly. The price went down toward the end of the year. This was the time when most of the cassava in the locality was harvested. There was also a significant price differential between producers and traders. The traders' price was usually a retail price in the market as most of the traders were retailers, while that of PG3 was wholesale price.

The price of the dried cassava chips in PG1 was constant because it was set by the feedmiller.

Comparative marketing efficiency of PGs and traders

Because four PGs were handling and trading product forms different from those of the traders, only PG3 was analyzed for comparative marketing efficiency.

PG3 rented a 2-ha farm for the production of cassava and sold the fresh roots at the farm. Usually, traders harvested the fresh roots themselves. For this reason, the minimal marketing cost of PG3 was mainly because the license fee (Table 6.10).

Table 6.9. Comparative selling prices of PGs and traders, Eastern Visayas.

Month	Macrohon	Maasin		Capoocan		Baybay		Dulay	
	PG1	PG2	Trader n=6	PG3	Trader n=5	PG4	Traders n=5	PG5	Traders n=6
					Pesos				
Jan	165[a]	-	-	-	161[c]	3750[d]	-	-	456[b]
	-	-	-	-	-	1890[e]	-	-	291[c]
Feb	165	-	-	-	164	3750	-	-	456
	-	-	-	-	-	1890	-	-	291
March	165	-	-	-	167	3750	-	-	456
	-	-	-	-	-	1890	-	-	291
April	165	-	-	-	169	3750	-	4167[g]	470
	-	-	-	-	-	1890	-	-	291
May	165	-	800[f]	-	177	3750	-	-	492
	-	-	-	-	-	1890	-	-	310
June	165	-	-	701	170	3750	550[b]	3325	492
	-	-	-	-	-	1890	222[c]	-	310
July	165	-	900	70	170	3750	550	-	492
	-	-	-	-	-	1890	222	-	310
Aug	165	-	900	-	170	3750	555	-	517
	-	-	-	-	-	1890	226	-	310
Sept	165	-	775	58	172	3750	555	-	531
	-	-	-	-	-	1890	222	-	310
Oct	165	-	600	58	172	3750	-	-	528
	-	-	-	-	-	1890	-	-	321

Table 6.9. (Continued).

Month	Macrohon	Maasin		Capoocan		Baybay		Dulay	
	PG1	PG2	Trader n=6	PG3	Trader n=5	PG4	Traders n=5	PG5	Traders n=6
					Pesos				
Nov	165	-	-	-	169	3750	-	-	522
	-	-	-	-	-	1890	-	-	321
Dec	165	-	-	-	148	3750	-	-	561
	-	-	-	-	-	1890	-	-	321

[a] Price of cassava chips in fresh equivalent, 100 kg fresh = 55 kgs chips x P3/kg.
[b] Price of sweetpotato per hundred kilograms.
[c] Price of fresh cassava per hundred kilograms.
[d] Price of choco roll in fresh equivalent, 100 kg fresh = 250 rolls x P15/roll.
[e] Price of cassava chippy in fresh equivalent, 100 kg fresh = 33 kg chippy x P60/kg.
[f] Price of sweetpotato retailed at the market.
[g] Price of sweetpotato chips in fresh equivalent, 100 kg fresh = 25 kg chips x P167/kg.

Table 6.10. Comparative marketing efficiency of PG3 and traders, Eastern Visayas.

Item	PG3	Trader
Operating Efficiency		
Marketing costs (P)	2	34
Percent capacity utilization	-	-
Losses (shrinkage/spoilage)	0	0
Pricing Efficiency		
Buying prices (P/100 kg)	27[b]	88
Selling Prices (P/100 kg)	66	167
Margins (P/100 kg)	39	79
Financial Viability		
Current capitalization (P)	3,370	4,500
Profit (Margin - MC)	37	45
Profit as % of operation cost	128	36.89[c]
Return on investment (%) [d]	46.2	32.3

[a] Only PG with similar form of product handled as its traders.
[b] PG3 does not buy produce from farmers. Represent cost of production.
[c] Profit/BP + MC x 100.
[d] Total profit/current capitalization + operating cost.
Operating cost = Total cost x volume handled.

The PG and traders invested some money in the performance of marketing functions. In Table 6.10, total investment refers to the current capitalization plus the operating cost. The return on investment (ROI) measures the amount of peso returned per peso invested on the activity. The ROIs of both PG3 and traders were 46 percent and 32 percent, respectively suggesting a very high financial viability.

The market is said to be efficient when the products are available to the consumers at the right time, place, and form and the least possible cost. Using the indicators of marketing efficiency reflected in Table 10, it is very difficult to measure whether PG3 was more efficient than the traders or vice-versa because of the marked differences in the marketing functions performed. For instance, except for selling the fresh cassava produce, PGs did not perform other marketing services. Operational and pricing efficiencies of PG3, therefore, cannot be compared with those of traders.

PGs encountered marketing problems such as lack of capital, low market price, unstable market, and unavailability of labor (Table 6.11). PGs complained of insufficient capital for the purchase of raw materials and payment for labor and transportation. To cope with their problems,

Table 6.11. Marketing constraints and coping mechanisms of PGs and support services provided by different agencies.

PGs	Problems	Coping Mechanisms	Support Services Provided	Agencies
PG1	Lack of capital to purchase fresh cassava tubers	Borrow money from institutions	Low-interest credit	DA DTI NGO
	Lack of transport and storage	Arrange pick-up of produce Sell product after harvest		DOST ViSCA
	Low market price		Trainings	
PG2	Lack of transport	Hire public utility jeeps	Trainings	ViSCA
	Unstable market		Technical assistance	DA
	Lack of capital	Borrow money from institutions Build up capital	Low-interest credit	NGO
	Low repayment of loans			
PG3	Low market price		Trainings	ViSCA
	Unstable market		Technical assistance	ViSCA
PG4	Lack of capital	Increase capital stock	Trainings	ViSCA
	Unstable market	contribution through	Technical assistance	ViSCA
	Unavailability of raw materials	capital buildup		
PG5	Lack of capital	Borrow inputs from members	Trainings	ViSCA
	Unstable market	Promote product by attending fairs	Technical assistance	ViSCA/DA
	Unavailability of labor	Give incentives to members who participate in activities		

PG1 and PG2 borrowed money from banks, while PG4 raised funds by building up its capital through its earnings. Instead of dividing the earnings as patronage refunds, these were plowed back to increase the PG capital base. Instead of raising funds, PG5 simply borrowed inputs from its members. At first, PG5 scheduled the members to process root crops without pay. This practice was later stopped because the members were discouraged to participate in the activity. Some cooking utensils were also borrowed such as the wok and laddle, including basins and pails.

Another problem was market instability such as unstable demand, uncertain quantity and frequency of orders, and uncertain supply of raw materials. Despite these problems the PGs managed to continue operating by instituting some mechanisms for problems they could do something about and asked assistance from agencies for problems they could not solve. For instance, there was a time when PG4 ran out of fresh roots for processing from both members and nonmembers in the village. The PG bought the raw materials from other villages. For the unstable market, PGs requested the assistance of the DA and ViSCA which in turn provided trainings to improve product quality and assisted in promoting the goods during agro-fairs and festivals. Several agencies provided support services to PGs. Some PGs participated in the LEAD financing in addition to their normal technical assistance programs. ViSCA was tapped to provide training on production, processing, and community organizing. DTI and DOST were also been requested by the PGs to provide technical services, trainings, and financial support.

The labor problem of PG5 involved mainly wages and incentives. A closer look at this problem suggested that PG5 needs to pay for the labor services rendered by the members instead of having them for free as explained earlier.

Benefits to Farmer-Members

Benefits derived by farmes from PG membership include employment, dividends, patronage refunds, high output price, low input price, and low interest rate for loans. Nonquantifiable benefits include access to trainings and seminars, and ready market for the produce.

PG-generated benefits

Excluding the nonquantifiable benefits, the total benefits derived by farmers from PG membership were substantial, except for one PG (Table 6.12). Most benefits were in the form of increased member contribution to build up the capital of the PG. Instead of declaring

Table 6.12. Benefits (in P) derived per member by farmers from the PGs, Eastern Visayas.

Benefits	PG1	PG2	PG3	PG4	PG5	All PGs
Dividends [a]	na	na	na	na	na	na
Patronage Refund [a]	na	na	na	na	na	na
Capital Buildup [b]	239.46	32.69	42.92	2278.33	59.70	297.67
Output Price Differential	na	na	na	430.90	(356.18)	14.21
Input Price Differential	na	na	na	na	na	na
Interest Differential	na	na	na	na	na	na
Other Income (wages) [c]	2,400	0	0	5,200	0	1,520
Total	2639.46	32.69	42.92	7909.23	(296.48)	1831.88

na - not applicable.

[a] None of the PGs declared dividends and patronage refund. Net incomes were plowed back to build up capital.

[b] Current capital less initial capital/number of members.

[c] Include wages for labor performed in the PG and rental of equipment borrowed by nonmembers.

dividends and indicating patronage refunds, PGs plowed back their members' shares to increase their capital base. PG1 and PG4 gave additional and sizeable benefits to their members in the form of wages for labor performed in processing root crops. Negative net benefits derived by PG members in PG5 were attributed to the negative output price differential. Members sold most of their fresh produce to traders at a price higher than that of the PG. Thus, a smaller quantity was sold to PG5.

Farmers' income

Table 6.13 presents the comparison of net income by farmer-members and- nonmembers. On a per hectare basis, the net income of sweetpotato farmer-members was P1,704, slightly higher than that of nonmembers' P1,520. Among cassava farmer, the net income was P1,210/ha for farmer-members and P1,342 fornonmembers. PG3 members were the only ones who incurred losses in cassava production. These losses were attributed to the misuse of cash and input loans borrowed from the PG. Cash loans were diverted to other uses such as for food and other household expenses, while fertilizer loans were diverted to other crops such as rice and corn.

Nonquantified benefits

Some of the nonquantified benefits derived by farmers from PG membership included attendance in meetings, seminars, trainings, and as a ready source of credit, and a ready market of farmer members' produce. Almost all members were satisfied with the procurement services of the PGs, except for PG5 where 65 percent expressed dissatisfaction caused by the uncertain and limited amount the PG could buy (Table 6.14).

In financing services, the majority of the members were satisfied with the services of PG1 and PG2. Most of the members in PG3 expressed dissatisfaction with the financing services of the PG because of limited amount of funds.

Summary, Conclusions, and Recommendations

1. In general, the root crop PGs were established for farmers to find supplementary income. PGs started with a minimal capital out of their own funds, except for one PG which was able to avail of LEAD funds. The main activities of the PGs varied from production to

Table 6.13. Comparison of net income (in pesos) by farmer-members and nonmembers, by crop, Eastern Visayas.

Item	Sweetpotato			Cassava			
	PG2	PG5	Average	PG1	PG3	PG4	Average
Farmer-Members							
Per farm	813.28	152.34	443.11	172.73	(276.71)	626.56	617.11
Per hectare	3,128.00	609.36	1,704.27	314.05	(728.18)	1,050.58	1,210.02
Per kilogram	1.53	0.22	0.76	0.08	(0.23)	0.73	0.39
Farmer-Nonmember							
Per farm	536.93	700.71	577.76	205.06	98.60	993.25	510.25
Per hectare	2,147.72	1,148.70	1,520.42	455.69	294.00	2,837.86	1,342.76
Per kilogram	1.33	0.47	0.71	0.09	0.13	1.05	0.38

Table 6.14. PG activities attended by farmers, reasons for selling to the PG, and number of farmers satisfied with the PG services, Eastern Visayas.

Item	PG1	PG2 a	PG3 3	PG4 a	PG5 a	All PGs
Farmers Reporting	20	20	20	8	9	77
Activities			Percent			
Meetings						
General assembly	90	75	100	100.00	91	91
Monthly meeting						
10-12	50	45	60	100	67	58
7-9	25	30	30	0	33	26
4-6	10	15	5	0	0	8
< 4	15	10	5	0	0	8
Number of coop-related trainings/seminars attended						
One	90	60	100	100	78	84
Two	10	5	0	0	22	6
Three	0	0	0	0	0	0
Reasons for selling to PGs						
Responsibility as member	55	na	na	62	0	43
Have patronage refund	40	na	na	38	100	54
Sure market of produce	5	na	na	0	0	3
Members satisfied with PG services						
Procurement						
Satisfied	100	na	na	100	33	84
Not satisfied	0	na	na	0	67	16
Financing						
Satisfied	60	75	45	na	na	60
Not satisfied	40	25	55	na	na	40

na - not applicable.

financing to processing, e.g., cassava chips for feeds, sweetpotato chips, and cassava and sweetpotato snack foods. Three of the five PGs were involved in financing, but loan operation was a major activity of only one PG. Only one processing PG earned a much larger annual income compared with the other PGs.

2. Of the five PGs in the study, one did not perform marketing functions other than financing and linkaging. The other four PGs served as ready market for the members' produce, except for one whose processing activities were uncertain. Thus, members expressed dissatisfaction of its procurement services.

3. Processing PGs earned higher net profit compared with the others. Although net profits as percentage of total cost were higher, no comparison was made vis-a-vis traders because of the differences in the products handled by them. However, a comparison of financial viability was made between one PG and the five traders whose activities were more or less similar. Both the PG and the traders exhibited very high ROIs suggesting financial viability. The result, however, should be treated with caution because the PGs' production cost was used as a proxy buying price, hence, lower than the actual buying prices.

4. Benefits derived by farmers from PG membership were substantial, except for one with negative net benefits due to high output price differential. Most benefits derived by members were in the form of capital buildup, suggesting lesser take-home benefits.

5. The major benefit provided by PGs to farmers was in the form of being a part-time employer of members' labor, mostly housewives, which were otherwise unutilized. Another is ensuring a market for farmers' produce.

6. Results of the study are far from being conclusive and should be used with caution because of the following reasons: (a) The root crop PGs studied were not homogenous in character because there were only few root crop PGs and the choice of sample PGs was limited. If a similar study is to be undertaken, sample PGs should be selected by type of root crops (sweetpotato and cassava) handled and activity (production and marketing, processing); (b) Root crop production, processing, and marketing activities are still considered secondary activities of farmers and traders, such that allocation and utilization of resources are affected. Results, however, especially in processing

of food products, suggest the potential of PGs in generating employment and in alleviating the income levels of farmer-members. The formation of small-scale processing PGs may have to be encouraged.

7. The potential of the PGs as a source of additional income served well the purpose of the small farmers. It needs continued support. But as long as root crop production and marketing activities remain a secondary activity of producers and processors, the commercial potential of the root crop industry remains dim. Programs promoting large-scale processing of root crops may need rethinking.

8. Only one processing PG earned a much larger income. This phenomenon could have been due to the degree of importance attached by members on their activities. PG members were more organized, dedicated, and resourceful compared with members of other PGs who just waited for things to happen. For PGs to be an effective instrument in rural development, those with the abovementioned characteristics of members need priority attention and support.

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Chapter 7

Marketing of Onions by Small Producer Groups in Central Luzon

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Introduction

One of the major cash crops planted after rice, onion is usually planted during the dry season (October to January) in irrigated lands in Central Luzon, primarily in Nueva Ecija. The common varieties are the yellow granex, red creole, and native varieties such as batanes and tanduyong.

Onions are highly seasonal and have short shelf life, unless kept in cold storage. With the frequent power outages, postharvest activities become problematic, hence; farmers dispose their products immediately after harvest.

Farmers know the technology and its income-generating capacity. Under normal situations, i.e., no drought nor major pest infestations, onion provides higher income per peso of capital investment compared with rice. Moreover, farmers have ready access to credit from local traders and Chinese middlemen. After harvest, these trader-financiers have the priority to buy the produce at the existing, or often depressed prices. The credit-marketing tieup works at the detriment of the producers, especially if they have no alternative outlets that offer competitive prices.

Given this scenario, the government intensified its campaign to form cooperatives or producer groups (PGs) to enhance financial access through the Land Bank of the Philippines (LBP) and improve the bargaining position of the farmers in the market.

This report focuses on the marketing operations of five small PGs of onions in Nueva Ecija and selected traders, where the PGs are located.

Data presented here pertain only to the marketing of red creole variety which is the most common. PGs also handle the other varieties, but were not considered in this study.

Objectives of the Study

The study aims to analyze the performance of various PGs and rural-based farmer-managed organizations engaged in the marketing of onions.

Specifically, it aims to:

1. provide an overview of the production-marketing- consumption systems of onions;
2. determine and analyze various marketing services performed over time by the PGs and traders;
3. evaluate and compare the marketing efficiency of these organizations with alternative marketing channels/institutions;
4. identify and determine the effects of support services and other related infrastructures and policies on the PGs;
5. analyze various marketing constraints and problems and determine the coping mechanisms of PGs;
6. evaluate the impact of these PGs on the social and economic well-being of farmers;
7. recommend some policy agenda/actions to improve the overall performance and economic efficiency of these marketing groups; and
8. develop possible research-policy linkages to enhance research results utilization.

Methodology

The study covered the province of Nueva Ecija, the leading producer of onions in the region. At the municipal/city level, the samples are the major sources of the product, namely, San Jose City, Rizal, Bongabon, and Laur.

A list of all PGs engaged in onion marketing was obtained from LBP. From the list, five PGs were chosen, the major criterion used was the involvement of the PG in group marketing.

Respondents of the study were the officers of the five PGs, 152 farmer-members, 53 nonmembers, and 12 traders who were randomly selected (Table 7.1).

Table 7.1. Number of respondents by PG.

PG Number	Farmer-Members	Farmer-Nonmembers	Traders
PG1	32	10	3
PG2	32	11	3
PG3	19	10	3
PG4	25	10	3
PG5	44	12	a/
Total	152	53	12

a/ The same traders for PG4.

Data were gathered through personal interview with the use of a questionnaire. Also interviewed were key informants who consisted of technicians of the Department of Agriculture (DA) and officials of local government units (LGUs). Secondary data were obtained from the Bureau of Agricultural Statistics (BAS), National Census Statistics Office (NCSO), municipal/city records, and published statistical reports. The marketing margins, costs, and net income of the PGs and traders were calculated. Simple costs and returns for representative members and nonmembers were also presented. The benefits accruing to the members were quantified and the nonquantifiable effects to the members and to the community were discussed. The problems and coping mechanisms of PGs were described and analyzed.

Review of Literature

Marketing Efficiency

Marketing efficiency can be defined as the minimization of the input-output ratio. The "outputs" of marketing are the consumer satisfaction with the goods and services. The "inputs" are the various resources of labor, capital, and management that the firms use in the process (Kohls 1974). Marketing efficiency can be subdivided into operational (technological) and pricing efficiencies. The first one assumes the essential nature of outputs of goods and services to remain unchanged and focuses on reducing production costs. The second one is concerned with improving the operation of the buying, selling, and pricing aspects of the marketing process so that it will remain responsive to consumer direction. The present study focuses on both operational and pricing efficiencies. At the farmers' perspective, an effective and efficient

marketing system is one that will induce the production of those commodities which, when sold tothe consumers, will result in maximum returns after deducting the marketing charges and farm production costs (Kohls 1974).

Marketing efficiency can be viewed in terms of marketing costs and margins. Theoretically, margin represents costs incurred in the performance of the marketing functions, including normal profit and risk premium. However, increases in marketing margin due to increasing marketing cost may not mean rising profits made by those doing the marketing (Shepherd 1993). In the same argument, farmers' receipt of a small share of the selling price does not mean that they are being exploited. Total margin will depend on the length of the marketing chain and the extent to which the produce is stored or processed. Onion, as a highly perishable crop that needs capital-intensive cold storage facilities, is expected to involve high marketing costs. Whether margins are reasonable depends on the costs.

One strategy to improve efficiency is grouping of the farmers into organizations which do the marketing and minimize costs through better coordination of activities. However, recent criticisms suggest that cooperatives are less efficient than other organization forms because of tax breaks and interest subsidies which utilize public funds. They also foster a more inefficient form of organizing production. Evaluation of the performance of a cooperative must be made carefully because the market presence of a cooperative may cause its for profit rivals to perform better than they otherwise would (Sexton 1990).

Marketing Outlets

An earlier study of San Jose City farmers producing "batanes" (a native variety) onions sold more often to the exporters, while those who planted red creole, yellow granex, and "tanduyong" (native) varieties sold to the local market traders (Marzan and Angeles 1989). The reasons for selection of outlets were: (a) the provision of seeds by the buyer and (b) higher price offered. The best buyers, as perceived by the producers, were the local market traders because they offered the highest price and had available cash. The worst buyers, on the other hand, were the agent middlemen who paid in installment.

Local traders were also utilized for upland crops in Indonesia (Hayami 1993). One of the reasons for the selection of outlet, aside from the credit-trade linkage, was strong ethnic relations which facilitate the enforcement of credit-marketing contracts.

In Nueva Ecija, wholesalers absorbed the bulk (66.5%) of the onions from the farmers, followed by assembler-wholesalers (21.9%), wholesaler-retailers (10.9%), and retailers (0.7%) (Maunahan et al. 1988).

Marketing Problems

The root cause of most marketing problems encountered by onion growers is the seasonality of production which results in market glut and eventually pulls prices down, particularly during the peak of the harvest season (Maunahan et al. 1988). The lack of price information was also a major constraint in marketing onions. Excess profit was occasionally earned by the intervillage collectors because of the delay in the transmission of price increases in metropolitan markets to village collectors and farmers (Hayami and Kawagoe 1994). However, the exercise of this monopolistic practice is limited to a very short period because village collectors may shift their supplies to other outlets.

Another problem relates to the credit-marketing tieup between the producers and traders which limits the choice of outlets for the farmers. The farmer-debtor is required to pay in kind after harvest when prices are at their lowest levels (Marzan and Angeles 1989). This is not a problem in Indonesia because town-based traders compete with village-based traders that prevents any monopoly/monopsony power to arise from the use of trade-credit interlinked contracts (Hayami and Kawagoe 1994).

Empirical Findings

Production-Marketing-Consumption Systems for Onions

Central Luzon is the major supplier of onions although its yield per hectare is quite low (10-11 mt) compared with its potential (25-30 mt). The low yield is influenced by the poor quality of seeds, poor weather conditions, and the incidence of pests and diseases. Within the region, 98-99 percent of the total produce comes from Nueva Ecija.

The marketing of onions approximates a competitive structure on the seller side, but a less competitive structure on the buyer side. A strong credit-marketing tieup existed between farmers and traders. However, for urban farmers who join the cooperative, this relationship has been minimized.

The marketing chain for cooperative members is shorter than that for nonmembers, although members' excess produce, i.e., over and above their payment-in-kind to the coop, still follows the traditional long route (Figs. 7.1-7.3). With the loan of about P18,000/ha, members had to sell 60-70 percent of his produce to the cooperative to pay back the loan at the existing price in 1992. However, from the cooperative, the bulk of the onions still passes through the hands of big businessmen in Manila and then distributed to wholesalers/retailers in Metro Manila,

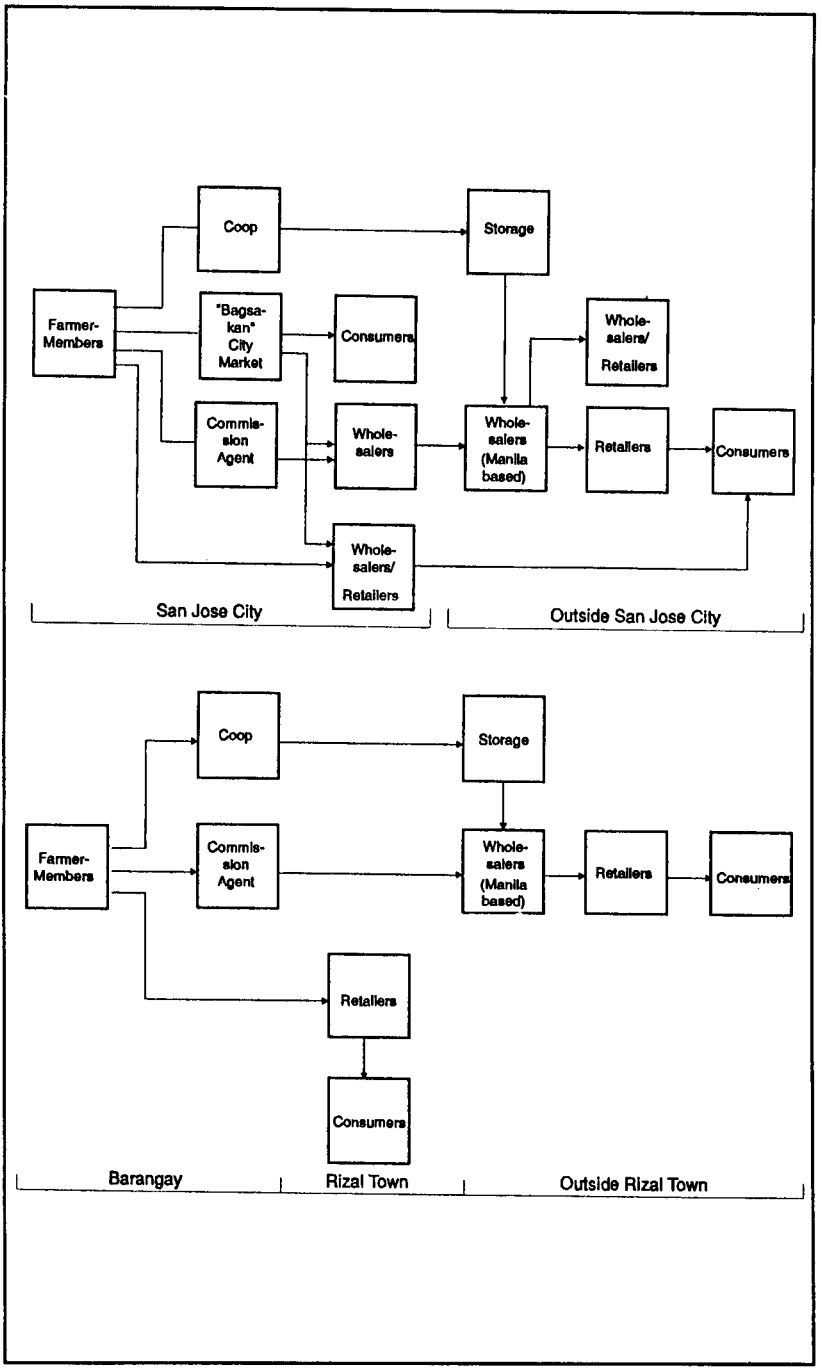

Fig. 7.1. Commodity flow at the town/city level, Rizal.

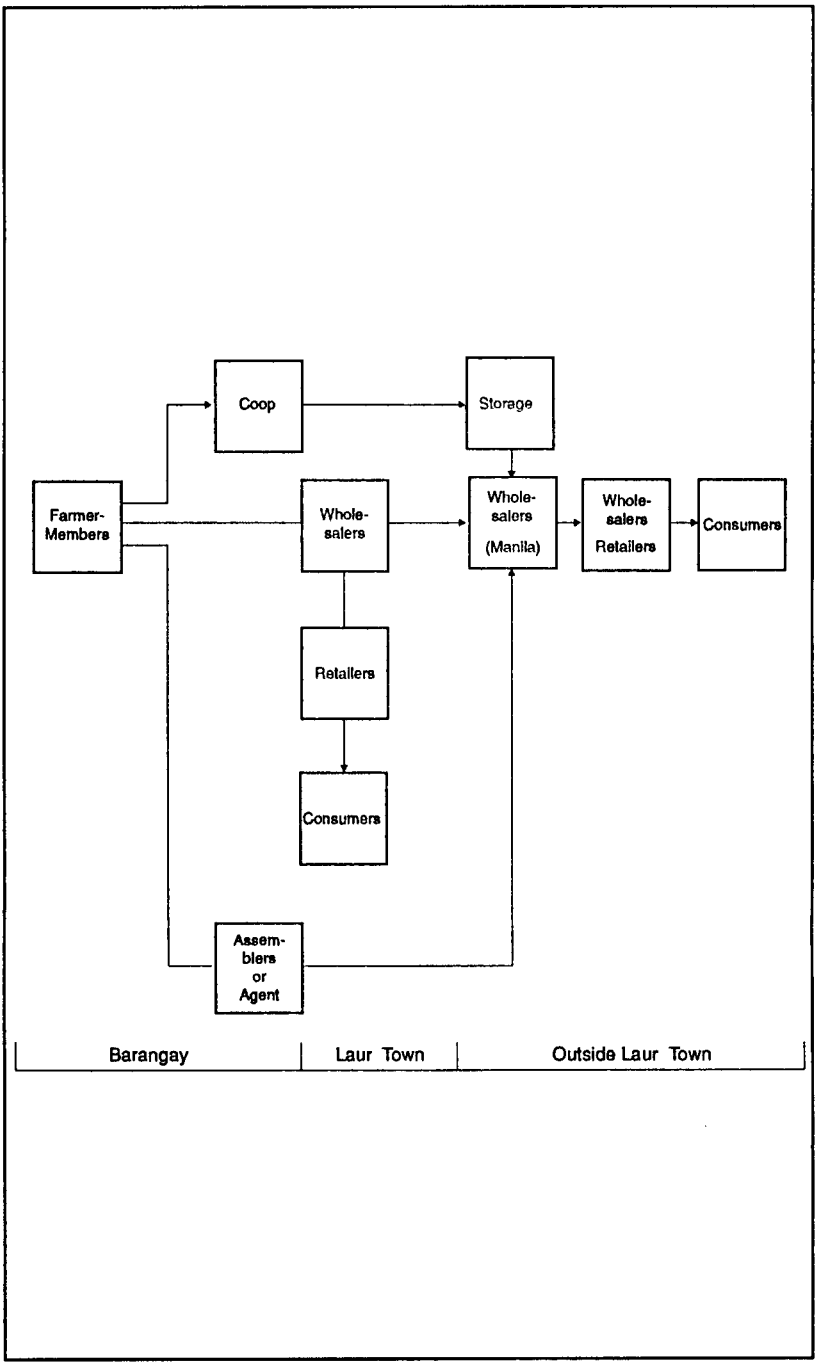

Fig. 7.2. Commodity flow at the town/city level, Laur.

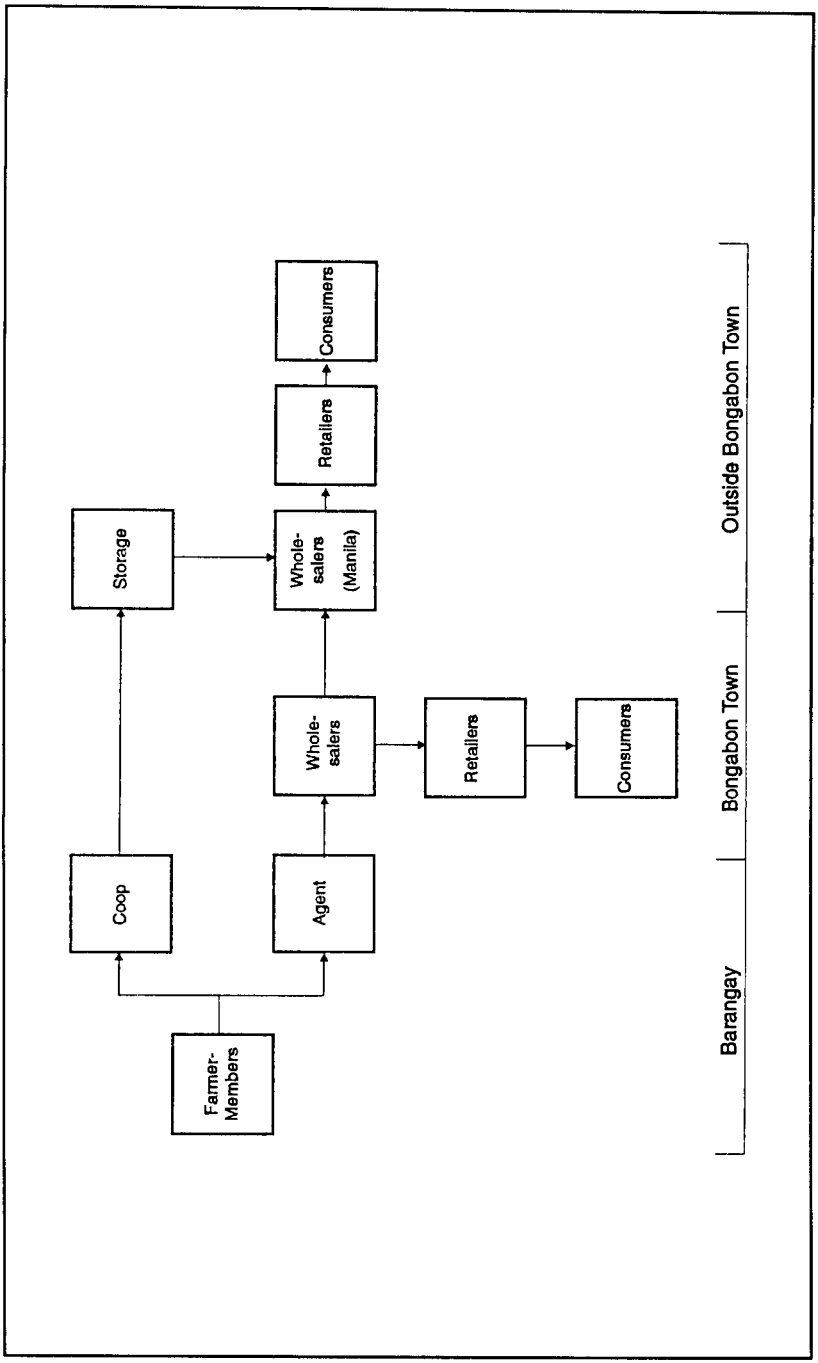

Fig. 7.3. Commodity flow at the town/city level, Bongabon.

Baguio, and in the Visayas and Mindanao. In actuality, the cooperatives acted only as assemblers of the traders. The variety stored in cold storage facilities is the red creole which is the focus of this research.

Onion is used as condiment to meat and vegetable dishes, hence, demand is inelastic. It is, therefore, expected that consumers will continue to buy the product, given a particular increase in price. This is reinforced by the relatively low per capita consumption of 0.8 kg/year in 1991. An increase in total demand is expected because of the high population growth rate of about 2.34 percent in 1991.

There is great potential for onion as a dry season crop. Its exportation is still wanting as only 11-12 percent of total production was exported in 1989-1991. Exports were mainly yellow granex and red creole varieties. In addition, processing of onions has not been fully developed.

Profile and Marketing Services Performed by PGs and Traders

PGs and the community

One of the small PGs (PG1), a marketing cooperative located in San Jose City, started in 1990 with an initial fund of P670,000. Since then, its capitalization has increased by more than five folds (Tables 7.2 and 7.3). With an initial membership of 65 farmers, it has now 159 members. In 1992, the area was the second leading producer of yellow granex onions and the fourth for red creole onions for the whole country. This is manifested by the wide area devoted to the crop, the volume of production, and the number of farmers and traders handling the commodity (Table 7.2). PG2, a multipurpose cooperative, is situated in barangay Estrella, Rizal about 20 km away from San Jose City. Its operation started in February 1989 with 32 members. By 1992, membership increased by more than eight times. Its present capitalization amounts to 1.5 million (Table 7.3). The town produces a big volume of onions, but only a few PGs handle the crop.

PG3 is a multipurpose cooperative engaged in onion and palay production, with a small membership (19) and P759,000 capitalization. It is situated about 5 km from the town proper of Laur, Nueva Ecija. PG4 and PG5 are also multipurpose cooperatives located in the barangays of Bongabon town (about 28 km from Cabanatuan City), both accessible to land transportation either animal-drawn or motor-driven vehicles. Bongabon is the leading producer of onions, both yellow granex and red creole varieties. PG4 was established later and with lower capitalization than PG5. Of all the PGs studied, PG5 has the highest amount of capital

Table 7.2. Selected information on municipalities under study, Nueva Ecija, 1992.

Location of PG		Area Planted		Volume of Production		Number of Farmers		Number of PGs Handling Onion	Number of Traders Handling Onion	Market Outlets
		Onion (ha)	Other Crops (ha)	Onion (mt)	Other Crops (mt)	Onion	Other Crops			
PG1	San Jose City	1752.5	75.82	21136.3	241[a]	1643	1000	28	60[c]	Wholesalers in Divisoria, Urdaneta, Pangasinan, Isabela, then to retailers in those places.
PG2	Rizal	432	420	1810	2452[b]	646	316	10	36[d]	Wholesalers in Divisoria. Buyers from San Jose City. Agents of Chinese businessman from Manila. Exporters from Manila.
PG3	Laur	518	285	2595	82[e]	811	811	8	40[f]	
PG4 and PG5	Bongabon	2000	1685	18281	no data	2000	1300	24	60[g]	

[a] Garlic, tomato, peanut, pole sitao, and pechay.
[b] Pole sitao, tomato, mungbean, watermelon.
[c] Six wholesalers using own money, 12 agents of Manila wholesalers, and 42 local retailers.
[d] 21 agents of wholesalers (based in Manila, San Jose City, Bongabon, and Cabanatuan City) and 15 local retailers.
[e] Other crops are gabi, tomato, mungbean, ampalaya, squash, pechay, sweetpotato, and ginger.
[f] All local wholesalers based at Laur, but 39 are agents of Manila wholesalers.
[g] 50 are local traders and act as commission agents of Manila wholesalers; 10 are wholesalers using their own money.

Table 7.3. Characteristics of PGs handling onion, Nueva Ecija.

Characteristics	PG1	PG2	PG3	PG4	PG5	Region
Location	San Jose City	Rizal	Laur	Bongabon	Bongabon	
Year Established	1990	1989	1991	1991	1989	
Initial Capitalization (P)	670000	5500	759000	200	7200	288300
Current Capitalization ('000 P)	3600	1506	759	23	5000	2118
Membership						
Original	65	32	19	22	57	39
Present	159	283	19	34	191	137
Net Annual Income ('000 P)	500	563	4	28	864	392

and net income. It was assisted closely by a church-based NGO, the Lusok Project Inc.

To be financially self-reliant, the PGs implement a capital buildup scheme (Table 7.4). Every year, a member pays P100-200 plus one percent of the loan from the LBP and a capital share of at least P200 depending on his financial capacity such as in PG4. PG1 accumulated P100,000 in 1991 and P50,000 in 1992. The amount (1 percent of the LBP loan and the contribution of members) is deposited in the LBP and could only be used when each member accumulated the desired amount, e.g., P20,000/member for PG5. The amount will be used for loaning to members in the future. This represents forced savings for the cooperative members. No such scheme is done by the traders.

Profile of onion traders

Most of the sample traders are located within the barangay or the town/city where the PG is situated. The presence of traders near the PGs enhances the competition in the area.

Table 7.4. Capital buildup scheme of the onion PGs.

PG	Scheme
PG1	Total PG capital buildup for 1991 is P100,000 and for 1992, P50,000. PG capital buildup is P100/member and every year, 1 percent of the loan of the farmer is retained by the coop. Up to P2,000/member is allowed for the capital buildup.
PG2	One percent of the coop loan is retained at the LBP. The same percentage is deducted from the loan of members. In addition, an amount of P200/ha per cropping season is deducted from each member after harvest.
PG3	Initial capital share is P860/member with additional capital share of P100/ha per cropping season.
PG4	Initial capital share is P200/member, then additional capital share is P1,200 each from 12 members and P1,000 each from 21 members. At present, additional capital buildup is 10 bags/ member (P2,500).
PG5	Capital share is P20,000/member to be paid every cropping season at P1,500-5,000/farmer.

The initial capitalization of the traders ranged from P3,500 to P178,000 (Table 7.5). The biggest capitalist among the traders is a Filipino-Chinese middleman based in Bongabon town who procured his supplies not only from that town, but also from adjoining municipalities and from San Jose City. All of them had profitable ventures, except that four traders did not provide information on their net income. On the average, a PG realized a net income of P111,250.

Marketing services and arrangements

There were more PGs performing the following services more frequently - procurement, storage, grading, packaging, financing, market information, training, and technical support (Table 7.6). Procurement is done through the acceptance of payment in kind for the loans of members. If the storage quota is not filled up, PGs procure additional quantity of onions from the members or nonmembers. All PGs assisted their members in finding possible market outlets. Two PGs promoted the product through their contact with traders in Manila. Retailing is not a regular activity of the PGs, but resorted to in 1992 to dispose stocks early and minimize spoilage. These services were provided by the PGs following someguidelines.

On the other hand, traders performed the following activities - procurement, market information, transport, packaging, financing, grading, and technical support.

Compared with their initial operation, the number of services provided to members has expanded. Cooperatives perceived that grading and packaging could possibly improve onions quality. Moreover, financial availability has improved.

Traders have continued the same functions to their clients since their initial operations. The number of traders providing credit to their clients declined. This could be attributed to the sourcing out of funds by cooperatives from the LBP.

The policies (Table 7.7) and buying and selling arrangements work in favor of the farmer members (Table 7.8). This is expected for a service-oriented organization such as the cooperative; but not for a purely profit-oriented trader or a business corporation (Table 7.9). One common arrangement among the PGs is that the members' produce for loan payment is picked-up from their house at the expense of the association. The commodity is then taken to the storage facility, with the cooperative paying the transport cost. Later, the cooperative sold the onions to wholesalers either in cash or in checks.

Traders picked up the farmers' produce at the farm at prevailing prices. Ten out of 12 traders paid the farmers in cash only after the

Table 7.5. Characteristics of sample traders handling onion.

	Traders/Location	Year Business Started	Initial Capitalization (P)	Current Capitalization (P)	Net Annual Income (P)
PG1	(San Jose City)				
	Trader 1	1970	-	-	-
	Trader 2	1978	10,000	1,000,000	300,000
	Trader 3	1986	50,000	100,000	60,000
	Average		30,000	550,000	180,000
PG2	(Rizal)				
	Trader 1	1987	40,000	390,000	70,000
	Trader 2	1983	10,000	40,000	60,000
	Trader 3	1984	100,000	100,000	200,000
	Average		50,000	176,668	110,000
PG3	(Laur)				
	Trader 1	1987	30,000	85,000	-
	Trader 2	1974	5,000	100,000	50,000
	Trader 3	1968	500,000	200,000	50,000
	Average		178,333	128,333	50,000

Table 7.5. (Continued).

	Traders/Location	Year Business Started	Initial Capitalization (P)	Current Capitalization (P)	Net Annual Income (P)
PG4	(Bongabon) a/				
	Trader 1	1980	-	15,000,000	-
	Trader 2	1970	2,000	100,000	-
	Trader 3	1983	5,000	50,000	100,000
	Average		3,500	5,050,000	100,000
Region			75,200	1,560,455	111,250

a/ Traders of PG4 are the same as for PG5.

Table 7.6. Services performed by PGs and traders.

Marketing Services	PGs (N=5)		Traders (N=12)	
	Initial	Present	Initial	Present
	No. Reporting			
Procurement	1	5	12	12
Storage	2	5a/	5	5b/
Transport	3	4	8	8
Grading	2	5	7	7
Packaging	2	5	8	8
Drying/Blowing	2	2	3	3
Financing	5	5	10	7
Retailing	0	2	2	1
Market Information	2	5	11	11
Training	5	5	0	0
Technical Support	5	5	7	7
Market and product promotion	1	2	2	2

a/ At the storage 3-5 months.
b/ At the traders' warehouse for 3-8 days.

Table 7.7. Policies and guidelines of onion, PGs.

Services/Policies	PG1	PG2	PG3	PG4	PG5
1. Procurement					
Priority of the coop is for payment-in-kind (PIK)	/	/	/	/	/
Procure at prevailing price	/	/	/	/	/
2. Storage					
Open to all members	/	/	/	/	/
Coop pays for the storage fee	/	/	/	/	/
3. Grading and Packaging					
Members do the grading and packaging			/	/	/
Final grading and packaging are done at the coop	/		/	/	/
4. Transport					
Transport cost from farm to storage is paid by the coop	/			/	/
Transport cost from coop to storage is paid by the coop	/	/	/	/	/
5. Financing					
Part of the LBP loan (1%) is retained for CBU (LBP policy)	/	/	/	/	/
6. Market Information					
Current prices of onions are discussed during meetings	/	/	/	/	/

Table 7.8. Marketing arrangements of onion PGs.

PGs	Buying		Selling	
	Source	Arrangement	Destination	Arrangement
PG1	Members and nonmembers	Picked up by coop at farmers' house Use prevailing price Medium and big have the same price Cash payment	Chinese businessman in Divisoria	Picked up at storage Cash payment
PG2	Members	Picked up by coop at members' house With price premium for PIK (P0.50/kg) Cash/Credit/Installment	Big- time wholesaler in Divisoria	Picked up at storage Cash/Check payment
PG3	Members and nonmembers	Picked-up by coop at farmers' house Credit	Clover Leaf, Pasay/Pasig Viajeros of Cabanatuan and Bulacan	Picked up at storage Cash/Check payment
PG4	Members	Picked up by coop at members' house Credit	Filipino-Chinese traders in Divisoria	Picked up at storage Cash payment
PG5	Members	Pickedup by coop at members' house or delivered to the coop Cash payment or surplus (excess of PIK) is paid after 2 months	Chinese-Filipino traders in Manila Viajero of Manila	Picked up at storage Check payment

product reached the trader's place (Table7.9). Two traders paid the farmers only after the products were sold. This required 2-3 weeks.

In selling, six local traders delivered their stock to Manila, while five waited for the Chinese wholesalers (their financiers) to pick up the products. Nine of them were paid in cash immediately after sale and three on credit.

It can be concluded, therefore, that PGs and traders followed the same buying arrangements, but differed slightly on the product disposal. PGs sold their onions to wholesalers or their agents at the Food Terminal Inc. (FTI) storage, while traders brought the product directly to their financiers (who were also wholesalers) in Manila. The difference was on the storage function performed by the cooperative to wait for a better price, while the traders did not perform this function and directly sold the onions to the wholesalers in Manila.

Table 7.9. Marketing arrangements, terms, and conditions of onion traders.

Marketing Arrangements	Traders of			
	PG1	PG2	PG3	PG4
Buying Arrangements				
- use prevailing price	3	3	3	3
- picked up from farm to traders house	3	3	3	3
- cash payment after delivery	3	1	3	1
- advance payment or cash after delivery		2		
- cash payment/credit				2
Selling Arrangements				
- delivered to wholesalers in Divisoria	2		1	1
- delivered to Chinese in Manila	1	1		
- delivered to wholesalers, retailers in Santiago, Isabela				1
- picked up by Chinese/Wholesalers and brought to Manila/Divisoria		2	2	1
- cash payment	3	3	2	1
- credit			1	
- cash payment/credit				2

Marketing Operations and Efficiency

PG1 in San Jose City purchased red creole onions primarily from its members. It also purchased from nonmembers to fill up the storage capacity rented at FTI, Cabanatuan City, Tarlac, and Bulacan. The group stored 525 mt, however, only 49 percent was sold because of spoilage at the cold storage brought about by power shortages (Table 7.10). The cooperative still realized a margin of P10.25 per kg and a net return of 6.33 after deducting the marketing cost of P3.92. The highest cost was incurred on storage fee of P3.12 per kilo for 6 months (79.5% of total marketing cost). A reservation fee of 10% of the value of the stored onions is also being paid to the owner of the facility. About 51 percent of the stored onions got spoiled at the cold storage that resulted in lower profit of PG1.

Comparing the buying prices of PG1 and the three sample traders, farmer-members benefitted from a higher price of P0.68 per kilo (Table 7.11). The marketing cost of the PGs amounted to 38 percent of the margin, while net profit was 62 percent of total cost. In terms of these indicators, the performance of the PGs was better than the three traders.

PG2, a multipurpose cooperative engaged in onion and rice trading, realized a positive net return, although lower than PG1. It procured onions at a higher price of P7.50/kg and sold the produce at P11.25/kg. The cooperative disposed the onions through a number of outlets such as a big-time wholesaler in Divisoria through its agent in the barangay, the Clover leaf market of Metro Manila, the NOGROCOMA, and other traders . This is the reason for the lower selling price, but minimal storage losses. The marketing cost amounted to P2.92 per kg because some of the costs were shouldered by the farmer. The storage cost of P1.92/kg was about two-thirds of the total marketing cost.

The traders' buying price in Estrella was lower, which resulted in a price difference of P2.42/kg compared to the PG. This means additional benefits accruing to the farmer-members, since the PG bought from the members at P7.50/kg (Table 7.11).

PG3 and PG5 incurred losses primarily because of low marketing margins, high marketing cost, and losses due to spoilage. The margin was kept low despite the high procurement price of PG3 to get enough volume to meet the capacity of the storage facility rented at Cabanatuan City. Even with this strategy, the PG did not meet its requirement which resulted in higher transport and storage costs (82% of marketing cost). PG5 also incurred high transport and storage costs (78% of marketing cost). PG3, PG4, and PG5 are about 30 km from Cabanatuan City with some 10 km of unpaved roads. PG3 reported to have lost 90 percent of its stored onions because of spoilage, while PG5 declared to have wasted 32 percent.

Table 7.10. Costs and returns of marketing operations of onion PGs and traders.

Item	PG1 vs Traders		PG2 vs Traders		PG3 vs Traders		PG4 vs Traders		PG5 vs Traders		PGs vs Traders	
Volume Handled (mt)	525a/	1,175	800	900	96b/	500	94	952	214c/	952	346	896
						Pesos per 100 kg						
Selling Price	1,650	630	1,125	595	1,050	845	1,400	940	1,150	940	1,275	790
Buying Price	625	557	750	508	767	714	800	844	800	844	748	693
Marketing Margin (MM)	1,025	73	375	87	283	131	600	96	350	96	527	97
Marketing Cost (MC)												
a. labor	31	4	43	23	25	68	22	52	40	52	32	40
b. transport	49	44	40		32	10	36	7	42	7	40	14
c. storage			192		260		104		288		231	
d. miscellaneous	312	18	17	27			2	2		2	4	10
Total	392	66	292	50	317	78	164	61	370	61	307	63
Total Cost (TC)	1,017	623	1,042	558	1,084	792	964	905	1,170	905	1,055	757
Net Profit (NP)	633	7	83	37	(34)	53	436	35	(20)	35	220	33
MC as % of MM	38	90	78	57	112	60	27	64	106	64	58	65
NP as % of TC	62	1	8	7		7	45	4		4	21	4

Total Cost = Average buying price + marketing cost
a/ Only 255,000 kg were sold, the rest were rotten in the storage.
b/ Only 9,625 kg were sold, the rest were rotten in the storage.
c/ Only 144,525 kg were sold, the rest were rotten in the storage.

Table 7.11. Comparative buying prices of PGs and traders and selling price of farmer-members and nonmembers (P/100 kg).

Location	Buying Price		Selling Price	
	PGs	Traders	Farmer-Members	Farmer-Nonmembers
PG1	625	557	561	544
PG2	750	508	681	686
PG3	767	714	806	671
PG4	800	844	567	388
PG5	800	844	705	718
Region	722	644	636	556

PG4, also located in Bongabon, had a profitable operation, even though it started only in 1991. Most of its members belong to a particular religious sect which might have a positive influence on the cohesiveness of the group. It realized a marketing margin of P6.00/kg (Table 7.10) and incurred a lower marketing cost. Some of the services were paid by the farmers. Even though the transport cost was quite high (22% of marketing cost), the storage fee was lower because of the smaller area rented at FTI in Manila.

Overall, the PGs have poorer financial status in 1992 as compared with 1991 because of the power outages in that year which resulted in significant onion spoilage in the cold storage. The poor performance of PGs is shown by the lower ratio of the gross margin to sales and the solvency ratios. Although no financial reports were gathered in 1993, informal interviews of PG officers revealed improved operational status and profitability of the associations. However, the better prices in 1994 resulted in the nonselling of onions by members to their cooperatives. Instead, they sold their products directly to the traders. This pole vaulting of the farmers affected their loan repayment to their respective cooperatives. Up to now, the main problem of the cooperatives is the low repayment by the members.

The average buying prices of the middlemen show a trend from traders within the same location as PG1 to PG4 (Table 7.10). This can be attributed to the time of planting and harvesting, i.e., Bongabon farmers harvest red creole 2-3 weeks late than San Jose and Rizal farmers.

The average selling prices in these areas followed the same increasing trend. The volume handled by traders was comparatively larger than that of the PGs because of higher capitalization and more complete facilities, especially for transport and warehouses.

The marketing margin of the traders ranged from P73 to P131/ 100 kg (Tables 7.10 and 7.12), while marketing costs were quite low (P50 - 78). This could be explained by the economies of scale of operation of the traders and the nonperformance of storage function. The average market cost of the trader is P63.30/100 kg, while the PG incurred P75.80/100 kg, if the storage cost is excluded. Highest costs were incurred on transport and loading and unloading the commodities. Traders within the location of PG1 and PG2 hired commission agents to enable them to penetrate better the sources of supplies in the barangays.

To be assured of the commodity, traders in Vega, Bongabon paid labor to pull and pack the onions for transport to their trading areas. This arrangement might have limited the possible alternative outlets of the farmers, but would lessen their time and cost in performing these activities.

Buying prices of PG1, PG2, and PG3 were higher to encourage members to sell to the cooperative (Table 7.11). In addition, the few number of traders in the village where PG2 operates encouraged the middlemen to offer lower prices to farmers.

On the other hand, there are big wholesalers in the areas of PG4 and PG5 who purchased at higher prices. However, PG4 farmer-nonmembers received prices lower than the coop members. There are a lot of middlemen from other towns that procure in the area of PG3 in Laur, Nueva Ecija.

The buying prices in Laur and Bongabon were relatively higher than in Rizal (PG2) and San Jose City (PG1) because harvesting time is earlier in the latter than in the former areas. Bongabon harvested their red creole onions in April, about 2 weeks later than San Jose and Rizal. At this time, supply is relatively small, thus, the higher prices.

Results indicate higher buying and selling prices of PGs (Table 7.12). On the average, PGs procured lower volume (346 mt) than the traders (882 mt). All PGs incurred higher costs as compared with the traders, higher net income (PGs 1, 2, and 4), and higher proportion of marketing costs relative to marketing margin (PGs 2, 3, and 5). Only two PGs (1 and 2) reported to have realized higher net income relative to the total cost. PG3 and PG5 realized a net loss in 1992 operations primarily because of the big losses brought about by erratic power supply at the cold storage in FTI and Cabanatuan. Even though the cost of storage is relatively high, it is still profitable for the PGs to store, unless significant spoilage occurs (Table 7.13). PGs seem to have a higher marketing cost than the traders (excluding storage expense), realized higher margin due to higher selling prices, but lower return on investment.

Table 7.12. Comparative marketing efficiency of PGs and traders.

Measures of Marketing Efficiency	PG1	T1	PG2	T2	PG3	T3	PG4	T4	PG5	T5	Region PG	Region Trader
									(Pesos/100 kg)			
1. Operational Efficiency												
- Marketing costs	392	66	292	50	317	78	164	61	370	61	307	63
2. Pricing Efficiency												
- Buying prices	625	557	750	508	767	714	800	844	800	844	748	693
- Selling prices	1,650	630	1,125	595	1,050	845	1,400	940	6,150	940	1,275	790
- Margins	1,025	73	375	87	283	131	600	96	350	96	527	97
3. Financial Viability												
- Net profits a/ for the year	16,142	822	6,640	3,330	(33)	2,650	4,117	3,332	(289)	3,332	5,315	2,693
- Return on investment b/ (%)	64	15	63	188	(0.62)	207	28c/	6.6	(0.82)	6.6	7	17

a/ Net profit is based from Table 7.5, excluding the quantity of rotten onions.
b/ Investment for onions is assumed to be 70% of total investment of the PG.
The 30% is for rice. For traders, the capitalization is for onion trading.
c/ Total investment of the PG is for onion.

Marketing facilities

Traders have more facilities and equipment. All have a weighing scale and 9 out of 12 traders own a vehicle. However, only one PG has a transport facility. Weighing scales were fully utilized and transport facilities of traders were fully utilized only during the peak harvest season (Tables 7.14 and 7.15). However, utilization rate could not be determined for the off-season. The more facilities the trader owns, the easier is the coordination of activities from procurement, transport to selling.

Shrinkage allowance

The shrinkage allowance of PGs was P2.0-3.5 kg/bag, and P1-2 kg/bag for the traders. In 1991, two PGs reported to have lost 32-39% of stored onions. One lost as much as 90 percent because of power interruptions. This was the reason for the net loss of PG3 and PG5. To minimize storage losses, the PGs closely monitored their stock, and had ready buyers in Divisoria.

Support Services to PGs

PGs availed themselves of technical assistance from the DA and from an NGO, financing from LBP and NGO, and storage facility from FTI and other private firms (Table 7.16). They also received office equipment from chemical companies and leased trucks from private individuals.

The primary source of loan by the cooperatives was LBP. The total production loan of all PGs amounted to P9.4 million in 1991. About P2.4 million was borrowed as facility loan. The loan amount per hectare for the members was P18,000 for production loan and P11,000 for facility loan which was used to defray expenses on storage, and crates/bags. The interest rate charged by LBP to the cooperative was 12 percent per annum as compared with 20-25 percent from other institutional sources, or more than 40-50 percent from private persons. The cooperative added 3-6 percent on the interest rate charged to the members or an amount equivalent to 15-18 percent/annum.

Premembership, leadership, and management training program were conducted by the DA and NGOs with funding support from the cooperative, LBP, DA, and NGO.

PGs tapped big-time businessmen as outlets of their produce, without any help from the government or NGOs. All products were sold in unprocessed form and picked up by the traders from the storage area at FTI in Metro Manila, or in Cabanatuan City, Bulacan, and Tarlac.

The effects of the support services to the PGs, though not empirically analyzed, were presumed to have positive effects on their

Table 7.13. Effect of power shortages on the PGs' yearly profit from onion sale.

	PG1	PG3	PG5
Volume of Onion (kg)			
Total handled	525,000	96,250	214,025
Sold	255,000	9,625	144,525
Spoiled	270,000 (15%)[a]	86,625 (90%)[a]	69,500 (32%)[a]
Net Profit (P)			
Total handled	33,232	-135	- 428
Sold	16,142	- 13	- 289
Difference	17,091	-121	- 139

[a] Percent of the total volume of onion that was spoiled.

Table 7.14. Utilization rate of facilities of onion PGs at peak harvest.[a]

Facilities	Capacities		Utilization Rate (%)
	Rated	Actual	
PG1			
2 Weighing scale	500 kg	500 kg	100
4 Blower	4,500 kg	4,500 kg	89
Transport b/ (10-wheeler)	500 crate	500 crates	
PG2			
Transport (Forward)	450 bags	450 bags	100
3 Weighing scale	50 kg	50 kg	100
7 Blower			
PG3			
No reported facilities			
PG4			
Weighing scale	60 kg	60 kg	100
Transport [b] Forward	450 bags	450 bags	
PG5			
Weighing scale	500 kg	500 kg	100

[a] Peak harvest for onion is March-April
[b] Leased

Table 7.15. Marketing facilities, rated capacities, and actual utilization of onion traders at peak harvest.[a]

Traders		Facilities	Capacities		Utilization Rate (%)
			Rated	Actual	
PG1					
	T1	Warehouse			50
		Transport			
		(Passenger type)			
		(Servicevehicle)			
		Weighing scale			100
	T2	Warehouse	3000-4000 bags	3000-4000 bags	100
		6 wheeler	300 bags	300 bags	100
		10 wheeler	850 bags	850 bags	
		2 weighing scales			
		(provided by Chinese	300 kg	300 kg	100
	T3	Transport			
		Owner-type jeep	80 bags	80 bags	100
		Truck	500 bags	500 bags	100
		2 weighing scales	500 kg	500 kg	100
			30 kg	30 kg	100
PG2					
	T1	Transport			
		Truck (Forward)	300 bags	300 bags	100
		Fierra	60 bags	60 bags	100
		Weighing scale	30 kg	30 kg	100
	T2	Transport			
		Forward[b]	300 bags	350 bags	
		Ten wheeler[b]	900 bags	900 bags	100

Table 7.15. (Continued).

Traders	Facilities	Capacities		Utilization Rate (%)
		Rated	Actual	
	Weighing scale	250 kg	250 kg	100
		30 kg	30 kg	100
	Warehouse	400 bags	400 bags	100
T3	Weighing scale	50 kg		100
	Transport			
	10-wheeler b/	850-900 bags	850-900 bags	
	Forward	350 bags	350 bags	100
PG3				
T1	Transport			
	Elf	180 bags	180 bags	100
	3 weighing scales	60 kg	60 kg	100
		50 kg	50 kg	100
		500 kg	500 kg	100
	Dryer	1,000 bags	1,000 bags	100
	Blower (provided by Chinese)	500 bags/load	500 bags/load	100
T2	Warehouse	1,500 bags	1,500 bags	100
	Transport			
	Elf	200 bags	200 bags	100
	2 ten wheeler	400 bags	400 bags	100
	2 weighing scales	50 kg	50 kg	100
		500 kg	500 kg	100
T3	Warehouse			
	Transport			
	Forward	300 bags	300 bags	100
	Elf	180-200 bags	180-200 bags	100

Table 7.15. (Continued).

Traders		Facilities	Capacities		Utilization Rate (%)
			Rated	Actual	
		Owner-type jeep			
		Weighing scale	500 kg	500 kg	100
		Blower			
PG4					
	T1	Transport			
		4 10-wheeler	800-900 bags	800-900 bags	100
		3 6 x 6	300 bags	300 bags	100
		Forward	300 bags	300 bags	100
			20 blowers		
		6 weighing scale	1,000 kg	1,000 kg	100
			500 kg	500 kg	100
		Sorting area	20,000 bags (0.50 ha)	20,000 bags	100
	T2	No marketing facilities			
	T3	Transport			
		10-wheeler b/	850 bags	850 bags	
		Jeep b/	70 bags	70 bags	
		Weighing scale	30 kg	30 kg	100

[a] Peak harvest for onion is March-April.

[b] Leased.

Table 7.16. Services and facilities provided by government agencies and NGOs to onion PGs.

	Agency	Support Services/Facilities
PG1	DA	Technical backstopping - training of coop officers and members
	LBP	Financial assistance
PG2	DA	Resource person during training and resolve problems of coop
		Swine dispersal for coop employees
	DAR	Gives certification of actual tillership by the farmer as required by LBP for loan processing
	Congress	Ceiling fan
	LBP	Financial assistance
	Chinese at Divisoria	Provided seeds on credit (but the coop is not obliged to sell produce to the Chinese)
	CIBA-Geigy	Office equipment (wall clock, steel cabinet)
	Chemical Co.	Refrigerator
PG3	LBP	Financial assistance
	Fertilizer dealer	Cash donation for typewriter
PG4	FTI[a]	Storage facility
	DA	Seminar on the latest farming technologies
	DAR	Land certificates
	LBP	Financial assistance
	LPI	Conduct trainings and seminars and provide technical support
PG5	LBP	Financial assistance
	DA	Technical assistance on onion growing
	GFSME[b]	Guarantees the loan of the coop
	LPI[c]	Financial assistance

[a] FTI - Food Terminal, Inc.

[b] GFSME - Guarantee Fund for Small and Medium Enterprises.

[c] LPI - Lusak Project, Inc.

operations, especially on the financial requirements and management capabilities of the officers. The financial assistance of the LBP encouraged farmers to join the cooperatives because of easier access to credit.

Problems and Coping Mechanisms

On the procurement side of cooperative operations, the major problems encountered were the high deterioration rate of onions due to ungraded onions procured by the cooperative (grading is done randomly), inadequate storage facilities and power interruptions, the limited supply of crates, and the higher buying prices offered by local traders (Table 7.17). The inadequate supply of wooden crates is attributed to the log ban. One of the reasons for the high deterioration rate at FTI is the poor and inadequate facilities such as limited supply of pallet tower and problem in maintaining the required temperature, among others.

Local traders tried to procure at higher prices in very short periods to meet their quota with the big merchants in Manila who provided them the capital. Another reason for this is for the traders to get the loan repayment of a few farmers with existing marketing tieups with them.

The seeming inflexibility in the procurement price of PGs can be attributed to decision making process in an association. The cooperative manager has to consult the cooperative Board of Directors before prices can be changed. Centralized decision making and nondelegation of authority to the manager represent a common limitation of a cooperative. Consequently, this may result in operational inefficiency.

To cope with these problems, PGs monitored closely of the products at the cold storage. Members were requested to temporarily store their onions in their houses with PGs providing the crates. To be competitive with the traders, PGs increased their prices for the high-quality onions, but reduced it for the low-quality products.

On the selling side, the quality of onions was the main problem. In addition, the payment in checks, interference of local executives, and the apparent price control by traders posed problems to the cooperative. The product quality was poor because the farmers had not learned to be quality- conscious. They also lacked knowledge on the various grades of onions. To alleviate these problems, PGs tried to dispose their produce at a faster rate through their contacts in the retail markets and in Divisoria. Cash payments were also accepted. On the traders' control of prices, PGs accepted the dictated price, especially if the onions were on the verge of spoilage or when the cooperative needed to sell the produce. Interview with farmer- members showed that there were areas in Nueva Ecija where outside traders were not allowed to operate.

Table 7.17. Marketing problems and coping mechanisms of small PGs.

	Problems/Constraints	Coping Mechanisms
PG1	a) Local traders buy onions at a higher price than coop	Coop increased its price quotations
	b) High deterioration rate of onion	Weekly check-up of storage to monitor deterioration of onion
PG2	a) Lack of storage space during peak harvest	Requested members to store in their houses, but coop to provide crates
	b) Inadequate supply of crates	
	c) Poor storage facilities causing deterioration	Established contact of retail outlets in Pasig and Pasay
	d) Sales volume reduction due to Manila Mayor Lim's order to stop retailers from selling in the sidewalk	Disposed onion at Divisoria market
PG3	a) Rejects were included	Reduced price
	b) Deterioration of onions at the storage	Individual disposal of onions from the storage
PG4	a) Poor quality of onion stored	Checked well the onions to be stored
PG5	a) Onions easily rot	Delivered onions 2-3 days after sorting
	b) Lack of facilities in the storage such as shade where onions will be placed	Did not deliver onions immediately to the storage

For traders, the procurement problems included (a) presence of rejects in the bag; (b) wide price variation; and (c) breach of the credit-marketing arrangement (Table 7.18). To minimize these problems, the traders closely watched the packaging at the farm, hired a classifier, and offered lower prices for the poorer quality. They also increased their prices to procure products of farmers who borrowed from them.

On the selling aspect, the price variability due to seasonality of supply and the mixture of rejects with the good ones were the primary constraints. Price variations were manifested by the higher procurement price in the province, but low price in Manila. This would mean a net loss on the part of the traders and the poor price transmission from the terminal market to the provinces. To minimize the constraints, traders, serving as agents, just accepted the price offered by the Chinese middlemen and got their commission fees. Traders resorted to regrading the onions to be acceptable to the wholesale (Manila) buyers. They were more strict in the procurement at the farm level.

These problems could be managed by PGs and traders; but the real constraint is the lack of storage facilities and the high perishability of the product, particularly yellow granex and red creole varieties.

Suggestions to improve onion marketing

PG officers suggested the following to improve onion marketing: construction of additional storage structures to enable farmers to wait for a higher price; improvement of the FTI storage facilities; and training of farmers to sell quality onions. Grading increases shelf life of onions and improves space utilization of the storage area.

One PG suggested that if funds are available, the cooperative or a federation of cooperative should put up its own storage facility near the production site which is more of a forward integration of the PGs' activities. There is also a need to look for alternative outlets in Metro Manila and other urban areas.

On the other hand, traders suggested the following: controlling production or supply; similar procurement price; limiting the number of traders to maintain a "good" price; financial assistance to the producers; and establishing good and reliable outlets in Manila to compete with the Chinese middlemen. One trader suggested the maintenance of good relations with farmers to ensure a ready source of the product and possibly minimize transaction cost.

Benefits to Farmer-Members

Farmers join an association with expectation of gaining some benefits. For a PG, the benefits provided to its members are in the form

Table 7.18. Marketing problems and coping mechanisms by onion traders.

Problems/Constraints	PG1	PG2	PG3	PG4	Coping Mechanisms	PG1	PG2	PG3	PG4
Buying									
Inclusion of rejects and rotten at the farm	2	2			Closely monitored packaging at the farm	1			
Farmers don't follow requirements in buying			1		Extra pay was given to classifier or hired agent to monitor packaging of onion	1			
					Rejects are priced lower		2		
					Informed the Chinese to buy his onions		1		
Some buyers offer higher price than prevailing price			1	1					
Limited capital				1					
Hard to buy onions on credit because many buyers buy on cash basis				1					
Selling									
Chinese stops buying if there are plenty of supply	1								
Strict grading for export	1				Follow strict grading at farm level	1			
Reduction in weight during transport		1							
Price of bought onion high, but price of onion sold low		1	1	2	Reduction in procurement price		1		
					Stored the onions and wait for price increase			2	
					Temporarily stopped buying				1
Buyers sometimes do not pay				1	Did not repeat selling to identified buyers				1
Price of onions not fixed			1						

of price incentives (P0.10-0.50 per kg), loan with lower interest rate (1-2%/month) as compared with commercial rates (5-10%/month), lower prices of inputs, higher output price due to delayed disposal of stored onions and share of the profits of the cooperative. These benefits amounted to P9,089 per member (PG3) to P22,933 (PG5) for one production cycle of onion (Table 7.19). Other cooperatives such as PG2 provided nonquantifiable benefits such as plaque of recognition for members repaying loans early and on time. Other social benefits derived by members were the increased possibility of borrowing rice from the cooperative; contribution when a family member dies; and spiritual value formation. PG5 provided technical supervision on onion production.

These benefits produced positive results such as additional income for the farmer because higher output price and lower cost of inputs and capital. Onion seeds were priced P340/can by the cooperative compared with P380/can if paid in cash or P500/can if on credit by the trader. The cooperative provided a ready source of funds which minimizes delays in farming operations (Table 7.20). These direct effects are expected to enhance the welfare of the members, lessen the growth of usurious practices in the community, and provide farmers and their families the opportunity to live a more luxurious life. The better access to credit and technical expertise from government agencies and NGO would put the farmer in a better status than before, aside from the development of"appropriate" social and spiritual values as a member of a group.

Table 7.21 shows the perceptions of the farmers regarding the effect of marketing and support services. The ready source of low interest funds and ready outlet of their produce are the two main benefits derived by members in joining a cooperative.

The additional benefits of members could be gleaned from the capital buildup (forced savings) by the cooperative, the technical supervision, and the unquantifiable social benefits derived (Table 7.20).

Just to show the possible differences in input usages and income of a farmer-member and a farmer-member of a coop, two typical farmers were selected in San Jose City. The input and output prices were based in 1994.

A sample cost-and-return analysis in PG1 showed that, on a per hectare basis, a member could realize a higher net income (using the same output and input prices). Although, this could not be attributed solely to his membership to the cooperative, the higher yield may be partly due to the larger amount of fertilizer used as part of his loan (Tables 7.22 to 7.25). Comparing the net income of the 152 farmer-members and 53 nonmembers, their net income from onions was statistically the same (Table 7.26). This does not include however, the quantifiable benefits of the members as shown in Table 7.19 and the unquantifiable ones (Table 7.20).

Table 7.19. Benefits to farmer-members.

	PG1		PG2		PG3		PG4		PG5		Region	
	Total	Per Member	Total	Per Member	Total	Per Member	Total	Per Member	Total	Per Member	Total	Per Member
Capital Buildup (P) a/	10000	629	36805	155	16340	860	97000	2853	3820000	20000	4070145	5933
Gain (Loss) due to Price Differential (P)	698250	4391	1800000	6360	16362	861	(23606)	(694)	(53506)	(280)	2437500	3553
Gain due to Interest Rate Differential (P)	594000	3736	1877101	6633	140000	7368	305800	8994	184177	964	3101078	4521
Gain due to Lower Price of Seeds (P)												
(if seeds are bought in cash) a/	44160	278	-	-	-	-	-	-	-	-	44160	64
(if seeds are bought on credit)	176640	1111	-	-	-	-	-	-	-	-	176640	257
Other Income (P) b/	47396	298	166723	589	-	-	19	0.56	429471	2240	643609	938
Total Benefits (P)												
(if seeds bought in cash)	1483806	9332	3880629	13737	172702	9089	379213	11153.56	4380142	22933	10296492	1500
(if seeds bought on credit)	1616286	10443	3880629	13737	172202	9089	379213	11153.56	4380142	22933	10428972	1520

a/ For rice and onion.
b/ Other income includes interests, commission, trucking.
c/ PGs 2-5, reported to have the same price with traders.

Table 7.20. Effects of marketing/support services provided to farmer-members by onion PGs.

PG1	Coop sells onion seeds for P340/can, while traders sell P380/can if cash and P500/can if on credit, so the farmers save P40-160/can.
	Farmers have a ready source of fund for their farming operations, so they can have their farming activities without delay.
	Farmers have a ready market of their produce, so they do not have problem looking for buyers of their produce.
PG2	Coop buys onion at a higher price from members - plus P0.50/kg.
	Farmers save P10/head for fare when they buy inputs in the coop.
	Unusers's practice is minimized because interest rate is lower in the coop.
	Farmers have a ready market for their produce, have experienced luxurious life like that in the city. They have tractors, jeeps, television sets, refrigerators.
PG3	Farmers have a ready source of funds and inputs for their farming operations.
PG4	They have a ready source of funds and inputs for their farming operations.
	Farmers have a supply of rice even if they have not yet sold their onions.
	Farmers can avail themselves of the storage allocation of the coop and wait for a better price for their produce.
PG5	They have a ready source of funds and inputs for their farming operations.

Table 7.21. Perceptions of farmers on the effects of marketing/support services provided to onion farmer-members by PGs and traders.

Effects of Services	San Jose City		Rizal		Laur		Bongabon		Bongabon	
	PGs	Traders	PGs	Traders	PGs	Traders	PGs	Traders	PGs	Traders
Number Reporting	32		32		19		25		44	
1. Financial assistance helped the farmer in farming family expenses	16	1	14		6	1	4		1	7
2. Interest rate is low	6		8		6		10		24	
3. Has a ready source of credit			6		4	1	6		15	
4. Ready market for produce			4	2	2					5
5. Additional income			2				1	1	3	
6. Others	2	1	2			1	1	2		

Table 7.22. Cost-and-return analysis of an onion farmer-member with production loan from FARMACO, 1994.

	Per Ha
A. Return (P)	
Cash	
Onion sales	118,700
Noncash	
Given away	800
Reserve for seeds	4,000
Total Noncash	4,800
Total Return	123,500
B. Cost (P)	
Cash	
Seeds	13,000
Fertilizer	7,110
Insecticide	1,440
Weedicide	1,450
Diesel	600
Rent of water pump	1,200
Interest on loan	2,000
Hired labor	10,000
Total Cash	36,800
Noncash	
Seeds	4,000
Family labor	4,568
Total Noncost	8,568
Total Cost	45,368
Return Above Cash Cost	81,900
Net Farm Return	78,132

Table 7.23. Inputs and labor used for 1 ha for farmer-member.

	No./ha	P/unit	Total
Seeds	10 cans Asgrow	P1,300 (credit)	13,000
Fertilizer	6 bags 14-14-14	300	1,800
	6 bags urea	235	1,410
	12 bags 16-20-0	300	3,600
	2 foliar	150	300
Insecticide	4 li Sherpa 5	360	1,440
Weedicide	10 Round-up	145	1,450
Diesel	20 gal	30	600
Rent of Pump	60 hour	20/hour	1,200
Hired Labor	Man-days/ha	Rate/day	Total
Planting	150	40	6,000
Harvesting[a]	150	40	4,000

[a] Includes cutting of leaves and packing.

Family Labor	Man-days b/	Total (P)
Land Preparation (Cutting rice stubbles and mulching)	40.4	1,616.00
Pulling Seedlings	12.0	480.00
Fertilizer Application	2.2	88.00
Spraying	4.0	160.00
Weedicide Application	3.0	120.00
Handweeding	45.0	1,800.00
Irrigating	7.6	304.00

[b] P40/day for all operations.

Production: Sold:

610 bags - onion	=	15,250 kg at P6/k	= P91,500
100 kg seeds of tanduyong	=	3,400 kg at P8/kg	= P27,200

Table 24. Cost-and-return analysis of an onion farmer-nonmember in San Jose, City, 1994.

	Per Hectare
A. Return (P)	
Cash	
Onion sales	74,700
B. Cost (P)	
Cash	
Seeds	13,000
Fertilizer	4,560
Insecticide	540
Weedicide	1,480
Diesel	900
Rent of water pump	2,400
Hired labor	9,200
Total Cash	32,080
Noncash	
Family labor	3,196
Total Cost	35,276
Return Above Cash Cost	42,620
Net Farm Return	39,424

Table 7.25. Inputs and labor used for 1 ha for farmer-nonmember.

	No./ha	P/unit	Total
Seeds	10 cans Asgrow	P1,300 (credit)	13,000
Fertilizer	10 bags 14-14-14	300	3,000
	6 bags Urea	260	1,560
Insecticide	2 li Folidol	270	540
Weedicide	2 Goal	120	240
Diesel	120 li	7.50	900
Rent of Pump	120 hour	20/hour	2,400
Hired Labor	**Man-days/ha**	**Rate/day**	**Total**
Planting	140	40	5,600
Harvesting	90	40	3,600
Family Labor	**Man-days a/**	**Total (P)**	
Land Preparation	28.0	1,120.00	
Pulling Seedlings	16.0	640.00	
Fertilizer Application	2.0	80.00	
Spraying	1.0	40.00	
Weedicide Application	0.5	20.00	
Handweeding	28.0	1,120.00	
Irrigating	4.4	176.00	

a/ P40/day for all operations.

Production: Sold:

498 bags - onion	= 12,450 kg at P6/kg	=	P74,700
100 kg seeds of tanduyong	= 3,400 kg at P8/kg	=	P27,200

Summary and Conclusions

Central Luzon is the major supplier of onions in the country for the yellow granex, red creole, and native varieties. However, productivity at present is quite low. The fluctuations in total output are attributed primarily to changes in the area harvested, which in turn is influenced by onion prices and the incidence of pests and diseases such as purple blotch and thrips.

Big Metro Manila merchants provide seeds, inputs, and capital to local traders, who in turn lend out to farmers, and thus, were able to capture the bulk of the produce at harvest time. To improve their bargaining position, farmers form cooperative associations which enable them to access capital from the LBP. But with the weak management capabilities, these groups have not significantly influenced the stability of prices and supply in the market, and ultimately act as assemblers of traders.

More functions are performed by PGs in their current operations than in the initial years, while traders have not changed their functions. The bigger capital of the PGs at present allows them to provide more services. The marketing arrangements followed by the PGs are simple and worked in favor of farmer-members.

Traders are more efficient than the PGs in terms of marketing cost per kilo and in the utilization of their facilities. The higher marketing cost of the PGs is because of the storage cost (63-82% of the total marketing cost). This function is not performed by the sample traders as shown by their cost structure. Excluding the storage cost, PGs still incur higher cost (P7.55 vs P6.33) compared with the traders.

With the longer experience in the business, more complete facilities and more adequate capital, and easier decision making and conduct of transactions, traders have the competitive edge compared with the PGs. However, PGs try to increase their capitalization through their additional interest charge on the members' loans (15-18% per annum) and the capital buildup schemes that they formulate.

Government agencies and NGOs assist in the cooperative development in the country. However, their number and types of assistance are few and uncoordinated. The participation of NGOs is quite limited, except for PG4 and PG5. The CDA should enhance its assistance to PGs and strengthen their management capabilities.

The heavy impact of government assistance is through its funding support to PGs at relatively lower interest rates.

Problems encountered by the PGs and traders are common to perishable agricultural commodities and highly seasonal products such as onions. Results show that farmers are not quality-conscious compared

Table 26. Comparison of net income (P) of onion farmer-members and nonmembers.[a]

	Per Farm		Per Hectare		Per 100 kg	
	Members	Nonmembers	Members	Nonmembers	Members	Nonmembers
PG1	101,373	73,089	60,042	56,256	1,410	1,383
PG2	136,802	85,739	87,994	76,053	1,273	918
PG3	59,266	39,319	41,211	31,855	5,237	1,434
PG4	158,522	117,654	113,321	108,938	1,382	670
PG5	88,059	84,882	80,553	85,343	1,365	1,226
Region	107,666	68,747	74,332	72,886	1,423	825

[a] t-tests showed nonsignificant differences between members and nonmembers.

with the local traders and the big wholesalers in Manila. While processing could lengthen shelf life, minimize losses, and add value to the product, PGs are not ready, at this time, to engage in processing onions.

The main problem of a farmer is lack of capital to use in farming operations. PG membership helps solve this problem. He could himself avail of a low-interest loan. However, the timing of release of the loan, oftentimes delayed, may work at the detriment of the farmer-member.

The higher buying price by the PGs positively influence the income of the farmers, while the profit share may not have a large impact because sharing the net profit is seldom practiced by PGs. Based on the overall results, it can be concluded that it pays to be a member of a cooperative. However, the efficiency of the PGs may not be at par with the traders who own a more complete set of facilities for transport and warehousing and bigger amount of procurement funds. Strengthening the management capability and resource base of the PGs may improve the marketing of onions in the future.

Recommendations

1. There is a great need to provide training for the PG officers on management functions and for members on value orientation towards cooperativism. The officers' training would strengthen their management capabilities, especially on planning, financial management, and monitoring and control. The seminars on values would educate the members on the importance of working together and their responsibilities and duties as members of an association, with special focus on credit worthiness. CDA, an NGO, or SCU can conduct the training.

2. The strengthened primary cooperatives or PGs could be formed into a secondary level or a federation to handle procurement of inputs, marketing of produce, construction of postharvest facilities, fund sourcing, among others. A higher management level training should be conducted, with emphasis on resource generation and mobilization, marketing strategies, monitoring and evaluation, and coordination. CDA, in collaboration with an NGO, SCU, and the federation could work as a team in providing the trainings. In addition, NGOs and SCUs could also provide technical backstopping in the operation of the federation.

3. Financial institutions, e.g., LBP, provide funding assistance to well-managed federations for the construction of cold storage that are

strategically located (e.g., one in San Jose City), purchase of transport facilities, and additional capitalization to procure excess produce of farmer-members. A trading post for perishable commodities could be established by the provincial government in Cabanatuan City. Anchored to the trading post is the establishment of onion processing facilities (onion powdering and drying) in Nueva Ecija.

It is expected that the volume of onions handled by the federation may lead to operational efficiency and the envisioned vertical integration of cooperative activities is attained. However, coordination among the cooperatives would pose as one of the major operating problems.

4. There is an urgent need to evaluate the facilities and operation of the FTI. The priority on the use of the facility should be given to the cooperatives/PGs. Closer monitoring of functionality of the equipment and the facilities is needed and the provision of adequate supply of crates, and pallet tower. A representative of the national federation of onion cooperatives may sit in the policy making body of the FTI to emphasize the crucial role of cooperatives in the development of the economy. This recommendation may be less important if storage facilities are already established in the production sites.

5. To possibly solve the problems of prices being dictated by the traders, delayed dissemination of market information to the producers, and the cooperative acting only as assemblers of traders, an office should be created to act as the link (COOPLINK) to the demand, supply, and price information for all commodities produced and needed by cooperatives nationwide. The COOPLINK offices (at the municipal, provincial, regional, and national levels) could be attached to CDA, DA or could stand independently and run as NGO, just like Martlink* which disseminates market information through its network. The direct users are the federations, while the ultimate beneficiaries are the farmer-members.

   Although this is a tall order that requires a lot of equipment and skilled manpower, it could be the positive move towards making the cooperatives market-driven institutions in the near future.

*Martlink is an NGO that gathers and disseminates market information (prices, demand, supply) of agricultural commodities to interested individuals or groups.

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Chapter 8

Marketing of Coconut by Small Producer Groups in SouthernTagalog, Bicol, and Eastern Visayas

Isabelita M. Pabuayon, Georgina J. Bordado, and Jose M. Alkuino, Jr.

Introduction

Background

In the Philippine strategy of agricultural development, the Department of Agriculture (DA) has expressed its commitment to advocate policies and undertake programs for promoting production-marketing linkages, among others, as a way to provide an economic environment supportive of private investment in agriculture. "These policies and programs must result in greater participation of farmers in postharvest processing and acceleration in the establishment of agro-processing efficiency, trade, and distribution and marketing of agricultural products from producers to consumers" (DA 1990). Toward this end, the formation of cooperatives and other producer groups (PGs) has been identified as a major mechanism by which small farmers can truly participate in development. The passage of the 1990 Cooperatives Law is a significant step in support of cooperatives development.

Despite the considerable potential of PGs in promoting farmers' welfare and enhancing rural development, they are constrained in many ways in effectively carrying out their functions and attaining their objectives. However, given the renewed optimism, interest, and support for the PGs at present, it is imperative that the role, strategies, problems, and constraints, especially with respect to marketing activities be assessed. The marketing role is emphasized as it is expected that significant contributions can be made in enhancing the value-added for farmers' produce, achieving greater bargaining power by farmers vis-a-vis the buyers, stabilizing supplies and prices for the consumers' benefits, and improving farm income.

Statement of the Problem

The need to improve the marketing system for coconut in the Philippines cannot be overemphasized, more so with the creation of the World Trade Organization (WTO) in 1994 of which the country is a member. This development will exert a considerable pressure for the Philippine coconut industry to be globally competitive, coconut products being the country's fourth principal export. In 1993, the National Statistics Office (NSO) reported the combined export value of coconut oil and dessicated coconut to be $441.34 million.

Because of the interdependencies between the dometic and the international economies, efficiency in the distribution system is a primary consideration. To be competitive in the world market, coconut must be moved from production points to major trading and processing centers and finally to domestic users and importing countries at the lowest cost possible consistent with the quality requirements of buyers. Otherwise, domestic users will have to pay higher prices and may even shift to substitutes while exporters may lose out to foreign competitors. Such eventuality will have a direct impact on demand, price, farm incentives, production, and farm income.

In this regard, it is imperative to examine the role of alternative marketing channels for coconut. Specifically, the farmer-based organizations such as the PGs should be given emphasis since they operate directly and can potentially exert some influence on the first-level markets. Their linkages with higher-level markets need to be investigated as well. To date, information on the efficiency and equity implications of promoting PGs as alternative marketing channels is scarce, hence this study. It is expected that information generated by the study will serve as inputs for coming up with an agenda that will address the marketing problems of coconut farmers, as well as in formulating macro and sector-specific policies consistent with the development of the industry and the goal of achieving greater competitiveness in the world market.

Objectives of the Study

The study aimed to analyze the performance of various PGs and rural-based farmer-managed organizations engaged in the marketing of coconut in selected regions of the Philippines, namely; Southern Tagalog, Bicol, and Eastern Visayas. Specifically, the study attempted to:

a. provide an overview of the coconut production-marketing linkages;

b. determine and analyze the various marketing services performed by the coconut PGs;
c. evaluate and compare the marketing efficiency of the PGs with alternative marketing channels/institutions;
d. identify and determine the effects of existing support services, related infrastructure, and policies on PGs;
e. analyze the marketing constraints and problems of PGs and determine their coping mechanisms;
f. evaluate the impact of PGs on the social and economic well-being of farmers; and
g. recommend a policy agenda for improving the overall performance of PGs.

Methodology

Conceptual Framework

In market-oriented economies, the formation of cooperatives makes economic sense when there is market failure (Sexton and Iskow 1988). Market failure occurs when market transactions are not efficiently handled because the conditions for competition are not satisfied. These conditions include: (a) large number of buyers and sellers; (b) free entry and exit of firms; (c) homogeneity of products; and (d) market participants possessing all information. When markets fail, farmers do not get the highest price possible for their output and do not pay the lowest price possible for their farm inputs.

Under this sitution, it may be beneficial for farmers to organize themselves into cooperatives and undertake marketing and input procurement through the organization. In this sense, cooperatives are distinguished from other firms in that they are owned, controlled by, and meant to benefit the members whom they serve. To maximize such benefits, a cooperative may vertically integrate into the market chain, either downstream (forward integration) by moving production stages closer to consumers, or upstream (backward integration) by supplying its own productive inputs.

The potential benefits from such vertically integrated operations are as follows: (a) more efficient operations than non cooperative firms thereby lowering marketing margins which allows the cooperative to buy at higher prices from members; (b) avoidance of effects of market power held by trading partners; (c) higher selling prices for finished products through control in the flow of production and assurance of high product quality; (d) reduction in farming risk due to market assurance and input

source; and (e) potential success in markets that no for-profit firm may serve. The latter is possible since farmers may accept a lower rate of return unacceptable to noncooperative firms and the cooperative can adopt a flexible pricing policy that would allow it do operate at such rate of return.

Reduction of margins may also be achieved through tax privileges not available to noncooperative firms or avoidance of litigation costs associated with opportunistic behavior of independent trading partners. The cooperative and its members usually have common incentives - the farmer wants to sell (buy) at the highest (lowest) price possible and the farmer-owned cooperative wants to pay (charge) its members the most beneficial price subject to recovery of its transaction costs. Such harmonization of economic exchange and interests does not usually exist in ordinary market transactions among independent market participants although it is possible to resolve conflicts via equilibrium market exchange when competitive conditions exist. Such conditions, however, oftentimes are not present in poor agrarian economies where the required infrastructure and communication facilities for enhancing competition are inadequate. Thus markets fail.

Cooperatives can potentially circumvent market power held by monopsony/oligopsony (monopoly/oligopoly) elements who may pay (charge) farmers a low (high) price for their produce (farm supplies) or practice price discrimination at no cost-justified reason. In this case, the cooperative provides a suitable alternative market outlet and input source.

The Study Areas

This study was undertaken in three regions of the country, namely: Southern Tagalog, Bicol, and Eastern Visayas. The first two regions rank first and second in coconut hectarage in Luzon, while Eastern Visayas ranks first in the Visayas.

Data Collection and Sampling Scheme

Both primary and secondary information were used in the study. The latter consisted of community level information intended to characterize the production-marketing linkages vis-a-vis the potential role of PGs. These data were collected from local government agencies, including the provincial offices of the Philippine Coconut Authority (PCA), Cooperative Development Authority (CDA) and DA, among others.

Primary data were collected through personal interviews of PGs involved in copra marketing. Although the original plan was to draw

random samples from the list of copra PGs provided by CDA and PCA, this did not materialize since there were problems in identifying the cooperatives. Some of them were no longer operational at the time of cooperatives survey or were not involved in actual copra marketing. Purposive sampling of the PGs was therefore done.

For each PG, random samples of farmer-members and non- members were drawn. Alternative marketing institutions such as private traders in the PGs' respective areas of operation were also personally interviewed to have some basis for assessing the relative performance of PGs.

The distribution of sample-respondents is presented in Table 8.1. Five PGs were selected from each region for a total of 15. There were 317 farmer-members and 164 nonmember-respondents. Trader-respondents numbered 39.

Analytical Techniques

Each PG was described with respect to its basic characteristics, marketing activities, support services availed of, and problems/ constraints, faced including the coping mechanisms adopted.The PG marketing operations were compared with those of traders, particularly in assessing marketing efficiency. The latter was determined by analyzing marketing/price margins vis-a-vis services, costs, and net income. This was based on the premise that competitive conditions would allow for efficient operations where marketing margins reflect the cost of services performed and payment (normal profit) to those who provide the services. It is also assumed that cost incurred is the lowest possible consistent with the market requirements. On the other hand, there will be no room for excessive profits such that the return to capital

Table 8.1. Distribution of sample respondents by region, Philippines, 1993.

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
No. of PGs	5	5	5	15
No. of Farmer-Members	103	131	83	317
No. of Farmer-Nonmembers	48	67	49	164
No. of Traders	11[a]	14[a]	14[b]	39
Total	167	217	151	535

[a] Village traders in the respective municipalities where PGs are located, except for Bicol where one town-based trader was included.

[b] Urban-based in the municipalities/city where the PGs are located.

would not be greater than its opportunity cost, including some risk allowance.

Impact of cooperative membership was analyzed by accounting for (a) the potential benefits that would accrue to farmer-members as per cooperative policies (e.g. maintenance of educational fund, giving of patronage refunds, and dividends); (b) gain/loss of the members due to output price differential by selling copra to the cooperative and not to the trader; (c) gain/loss of the members because of input price differential by sourcing inputs through the cooperative and not from an alternative source; and (d) gain/loss of the members because of interest rate differential from loans accessed through the cooperative and not through an alternative source. Farm incomes of members and nonmembers were also compared to determine if income dfferentials are attributable to cooperative membership or not. Nonquantifiable benefits were determined based on farmers' attitudes, perceptions, and degree of satisfaction with PG services.

Empirical Findings

Characteristics of the Coconut PGs

Except for one, all the sample PGs functioned primarily as multipurpose cooperatives (Table 8.2). This means that they were involved in economic activities other than simply marketing the members' produce. They provided credit to members and procured copra from both members and nonmembers. Two PGs in Southern Tagalog and four in Bicol distributed fertilizer to members which were sourced from the PCA free of charge. One PG in Southern Tagalog and three in Bicol operated a consumer store. The former also operated a mini junk shop and was engaged in hog dispersal for its members.

As full-fledged cooperatives, most PGs were relatively young, having been established after the mid-1980s and in the 1990s. In Eastern Visayas four PGs were established in 1992, and one in 1991, while in Bicol, one PG started only in 1993. In Southern Tagalog, two PGs were established in 1991, while one PG was registered only in 1994 although it started as a precooperative as early as 1973. The PGs were registered with the CDA and PCA.

All PGs were operational as of the survey period, but one PG in Southern Tagalog and another in Eastern Visayas stopped their operations in February and middle of 1994, respectively. The former was expected to resume operation in June 1994.

Initial capitalization averaged P10,034 and was highest for Southern Tagalog and lowest in Eastern Visayas. Across PGs, the lowest was

Table 8.2. Characteristics of copra PGs, by region, Philippines, 1993.

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
Nature/Function				
Multipurpose	5	4	5	14
Marketing	-	1	-	1
Year Established				
1980 and earlier	2 [a]	-	-	2
1981-1990	1 [b]	4	-	5
1991-1993	2	1	5	8
Capitalization (P)				
Initial				
Range	165-70,000	3,500-16,400	2,200-12,000	165-70,000
Average	15,953	7,470	6,680	10,034
Current				
Range	11,500-600,000	14,000-950,000	20,000-93,000	11,500-950,000
Average	172,300	226,600	55,850	151,583
Membership				
Initial				
Range	22-107	35-65	28-62	22-107
Average	51	50	40	47
Current				
Range	37-130	35-164	17-54	17-164
Average	76	93	36	68
Service Coverage				
Members and nonmembers [c]				
Average	103	[d]	65	84

Table 8.2. (Continued).

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
Registration				
CDA	3	3	-	6
SEC	1	-	-	1
CDA and PCA	1	2	5	8
Annual Net Income (P)				
Range	4,232 - 117,522	(120,090) - 28,499	3,870 - 45,936	(12,090) - 117,522
Average	41,155	(13,986)	26,337	17,835

[a] One PG started as Samahang Nayon in 1973 and one in 1975. The former was registered as cooperative in 1994, the latter 1989.
[b] Has remained as Farmers' Association until the time of survey.
[c] All PGs served both members and nonmembers.
[d] Number of nonmembers was not reported.

P165, but the highest was P70,000, both for PGs in Southern Tagalog. Present capital has risen to P151,583, on the average, the highest being in Bicol at P226,600 and the lowest in Eastern Visayas at P55,850. Across PGs, the lowest present capital was P11,500 for a PG in Southern Tagalog; the highest was for a PG in Bicol at P950,000.

PG membership has generally increased, initially averaging 47 per PG and rising to 68 in 1993. In Eastern Visayas, however, average membership declined from 40 to 36 because of migration of some members to other places. However, since PGs also served nonmembers, their service coverage was much higher, averaging 84 farmers.

Net annual income averaged P17,835, but Bicol PGs, on the average, incurred a loss of P13,986. One PG was engaged in highly diversified operations and suffered a loss of P120,090 during the year under review. This was reportedly due to poor management and large depreciation expense for its facilities and equipment. The four other PGs earned an annual net income of P30,890.

Except for Eastern Visayas where seven trader-respondents were city based, most traders were barangay-based and operated within the adjacent areas of PG operations. This is especially true in Southern Tagalog and Bicol A few sample traders were town based. In Eastern Visayas, city-based traders consisted of four assembler-wholesalers and three asseembler-wholesaler-shipper-exporters.

Community Profile of PG Areas

PGs were village-based and located in 13 municipalities in the three regions covered by the study (Table 8.3). In Southern Tagalog, the municipalities were Cavinti in Laguna province and Calauag and Atimonan in Quezon province. In Bicol, these were Sipocot and Tinambac in Camarines Sur province, Ligao and Camalig in Albay province and Castilla in Sorsogon province. In Eastern Visayas, these included Palo, Julita, Burauen, Dagami North and Dagami South, all in the province of Leyte.

Coconut is a major commodity in all the municipalities covered. Other important crops included rice, corn, banana, vegetables, and rootcrops. There were other PGs operating in the municipalities averaging about nine per municipality although in some areas the actual number involved in copra marketing was not reported. Traders actively involved in copra marketing numbered about 11 per municipality.

The distance of the PGs to the town proper varied, the nearest about 2.5 km and the farthest 19 km away from the town proper. Generally, coconut farms were quite distant, hilly and connected by rough interior barangay roads. Transport from the farms was usually by cart and carabao and in hilly areas by horse.

Table 8.3. Community profile of the copra PG areas, by region, Philippines, 1993.

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
No. of Municipalities Covered	3	5	5	13
Avg. No. of Traders per Municipality	19	6	8	11
Avg. No. of PGs per Municipality	17[a]	2	7	9
Avg. No. of Farmers				
Coconut	26,737	3,147	5,520	11,801
Others	13,140	3,415	5,792	7,449
Avg. Cropped Area (ha)				
Coconut	19,551	4,154	8,007	10,571
Others	1,830	3,350	7,626	4,269
Avg. Production (mt)				
Coconut	34,198	27,678	[b]	30,938
Others	3,291	6,902	[b]	5,907

[a] Actual number involved in copra marketing could not be determined.
[b] Not available.

The Production-Marketing System

Coconuts are processed into copra at the farm. Farmers, however also sell nuts.

Copra moves from the farm through various intermediaries via either PGs or traders which may be village or urban based. Copra is then transported to the processors, primarily oil mills, and eventually finds its way to domestic consumers and exporters for shipment. Copra is also exported directly. One sample trader in Tacloban City shipped copra to Korea.

Geographically, copra flowed through intraregional and interregional trade channels. For example, copra produced in Southern Tagalog villages moved through market channels and eventually was processed in Lucena City oil mills, also in Southern Tagalog. The same pattern was observed in Bicol where the farmers' produce was directly processed by the urban-based oil mills in the region. Interregional trade, on the other hand, was common in Eastern Visayas where copra was shipped to other islands/regions such as other Visayan regions (Cebu and Roxas), Mindanao (Iligan, Gingoog, Cagayan de Oro, General Santos, Misamis Occidental, and Dipolog), and Luzon (Manila and Lucena).

Figs. 8.1 to 8.16 trace the flow of copra from the farm to the immediate outlets which consist of the PGs, traders, and processors. As an alternative to PGs, farmers in Southern Tagalog and Bicol generally sold to village- and town-based traders. However, in Eastern Visayas, some farmers sold directly to city-based traders such as the assembler-wholesaler and shipper-exporter.

Table 8.4 shows that, on the average, the proportion of farmers' produce channeled to traders was larger than to PGs, at 71 percent and 29 percent, respectively. This was true even among farmer-members whose volume sold to traders averaged 57 percent, with the remaining 43 percent going toPGs. Across regions, Southern Tagalog farmers sold more to PGs, about 51 percent, as compared with 16 percent and 20 percent for farmers in Bicol and Eastern Visayas, respectively.

The finding implies that farmers did not give full support to PGs. The reasons cited by farmers for selling to traders were credit-marketing tieup with buyers, accessibility of outlets, and higher price offered. In one case in Eastern Visayas, the volume sold to the PG was very small (only 4%) owing to the disintegration of the members up to the point of the dissolution of the organization itself. For another PG in this region, the volume procured from members was only 6 percent and this was because of the accessibility of farmers to Tacloban city traders who offered higher prices than PGs. For some nonmembers in Bicol, the landlord influenced their choice of market outlet in addition to the usual regular buyer ("suki") relationship with their outlets.

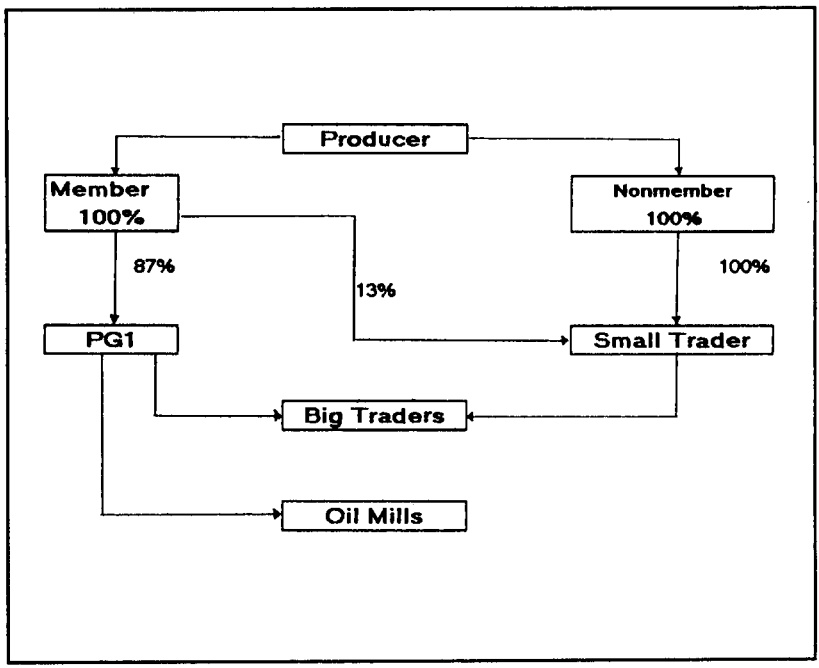

Fig. 8.1. Flow of copra from the producer to end user, PG1, Southern Tagalog.

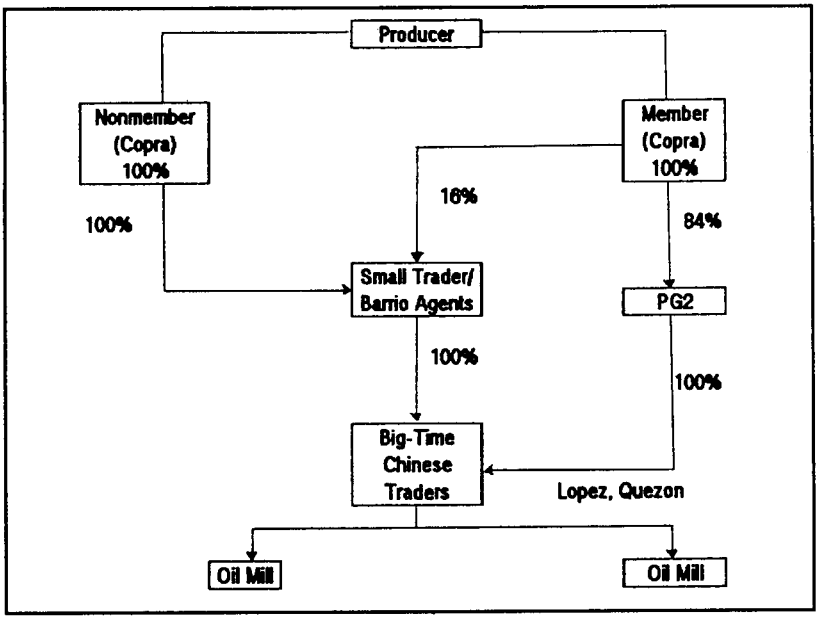

Fig. 8.2. Flow of copra from the producer to end user, PG2, Southern Tagalog.

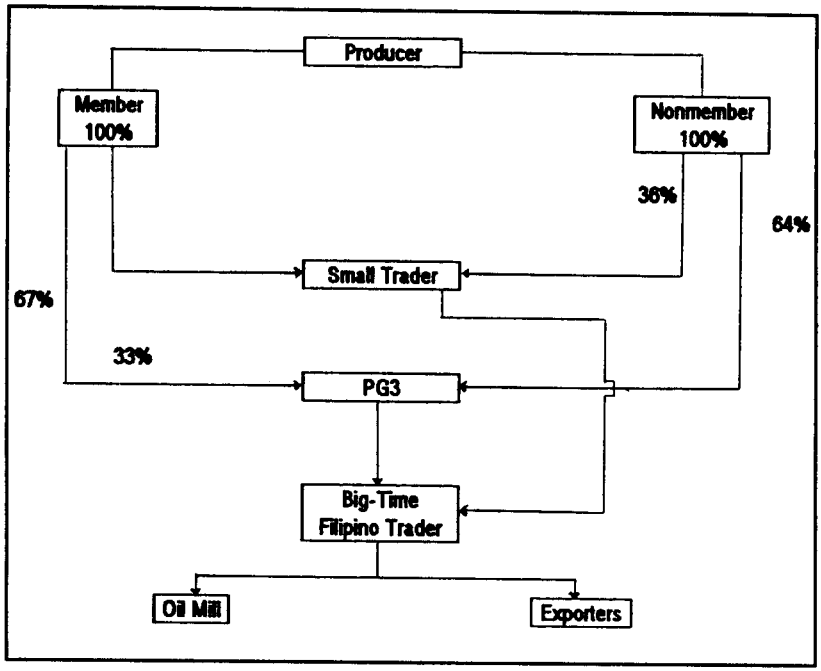

Fig. 8.3. Flow of copra from the producer to end user, PG3, Southern Tagalog.

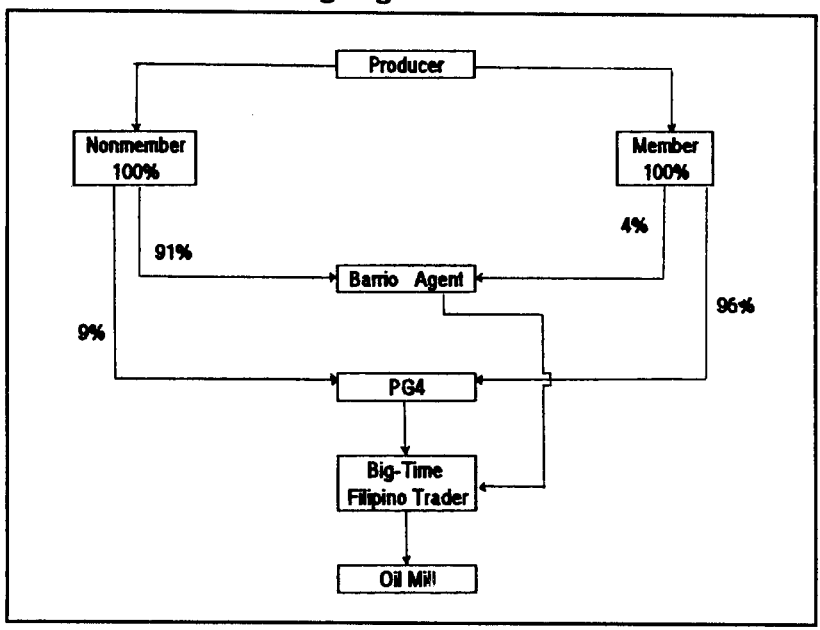

Fig. 8.4. Flow of copra from the producer to end user, PG4, Southern Tagalog.

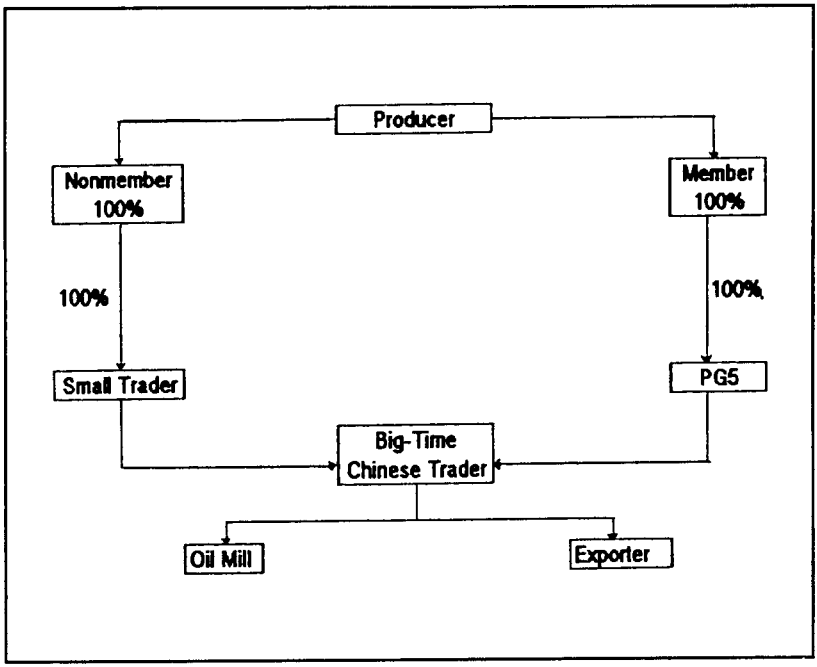

Fig. 8.5. Flow of copra from the producer to end user, PG5, Southern Tagalog.

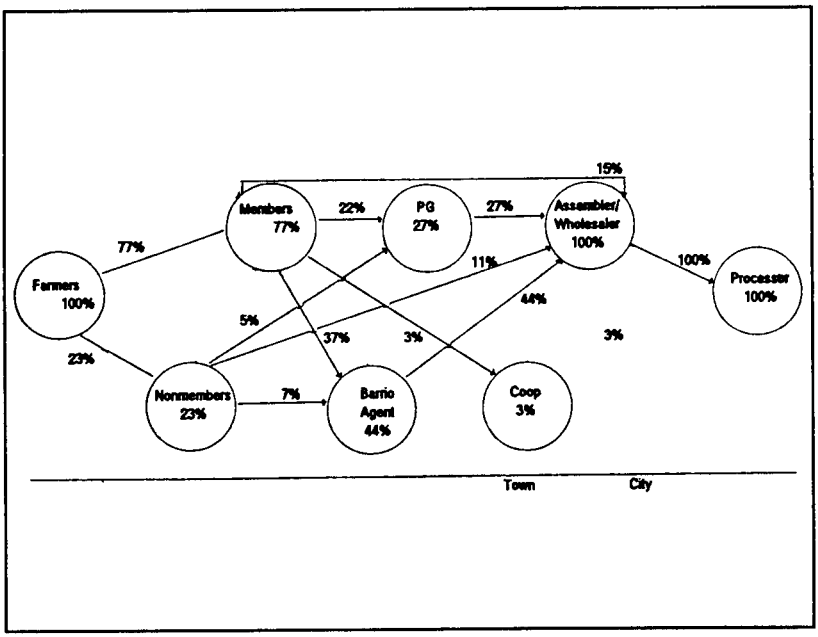

Fig. 8.6. Flow of copra for PG1 in Bicol, 1993.

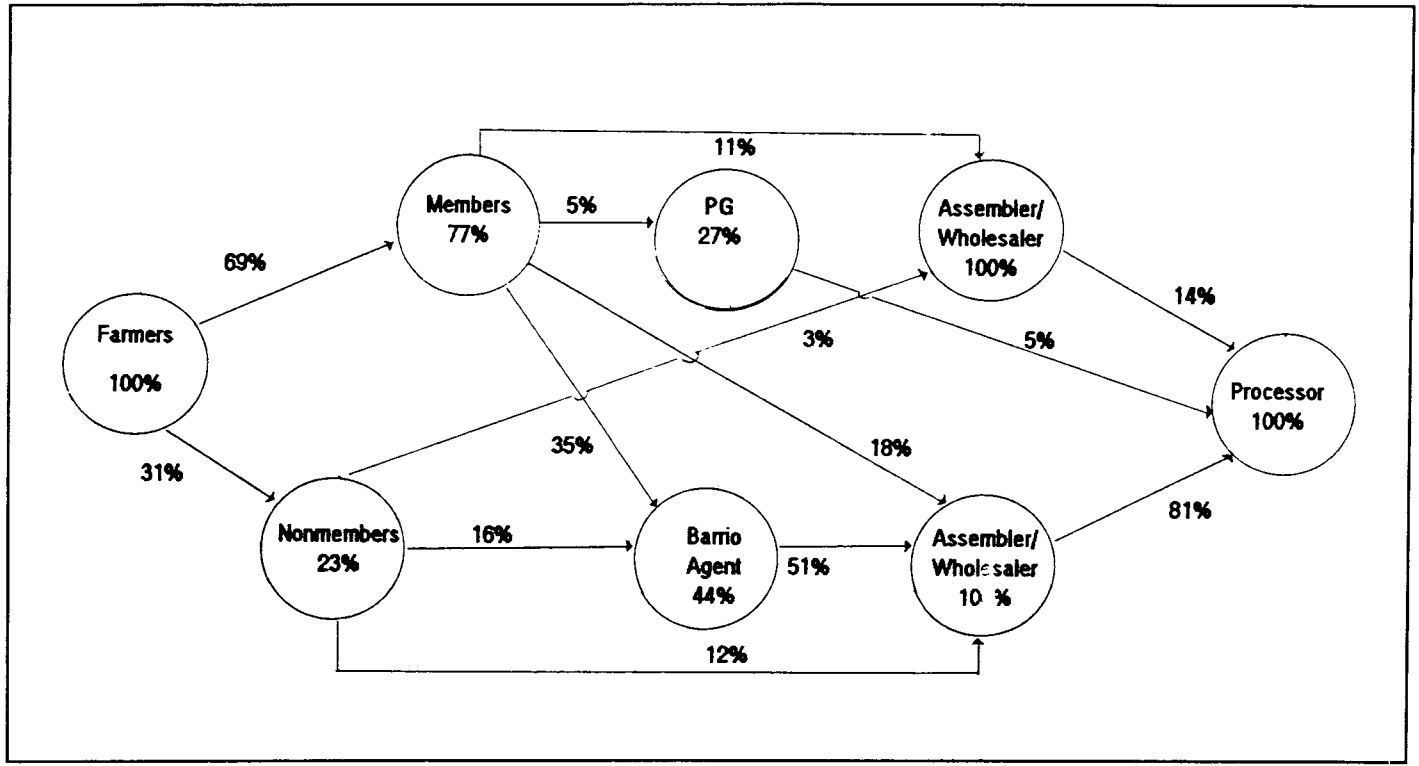

Fig. 8.7. Flow of copra for PG2 in Bicol, 1993.

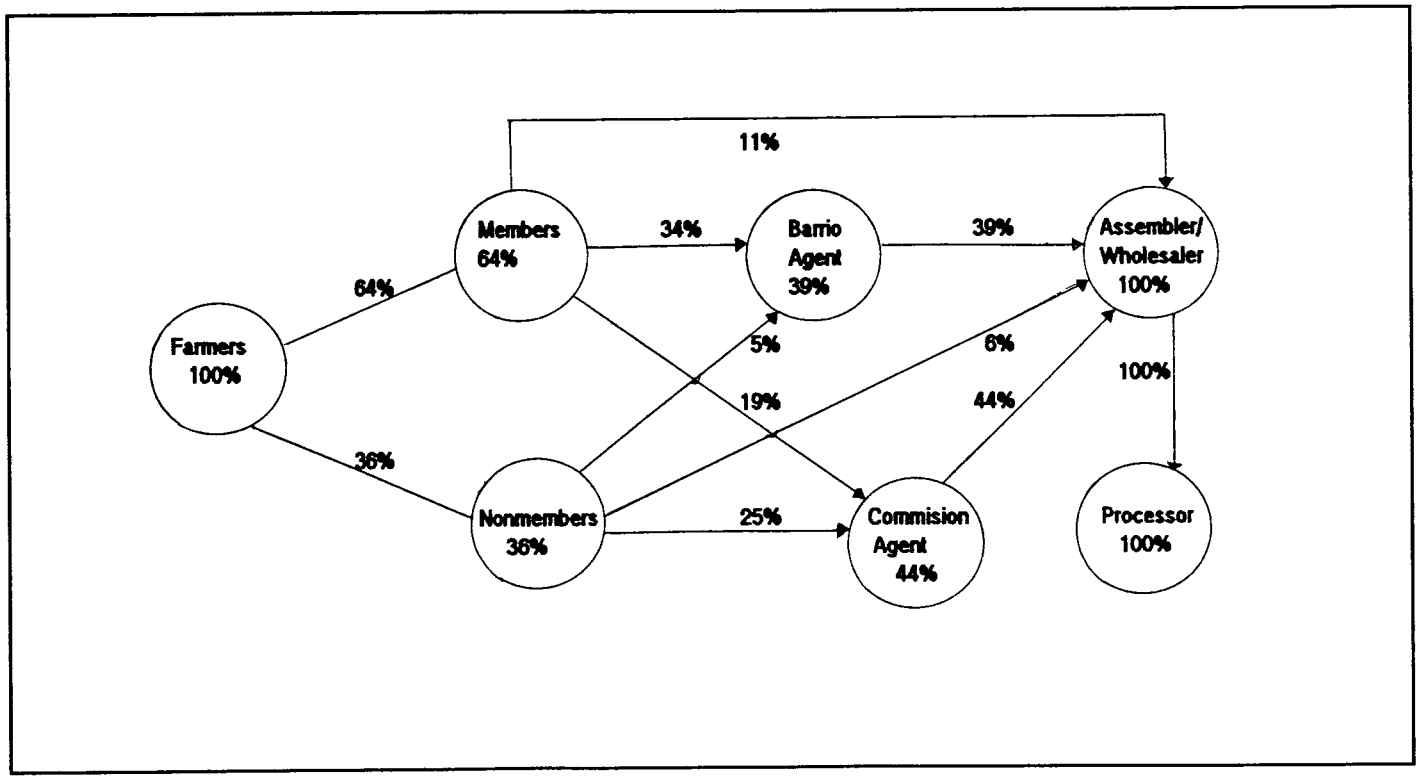

Fig. 8.8. Flow of copra for PG3 in Bicol, 1993.

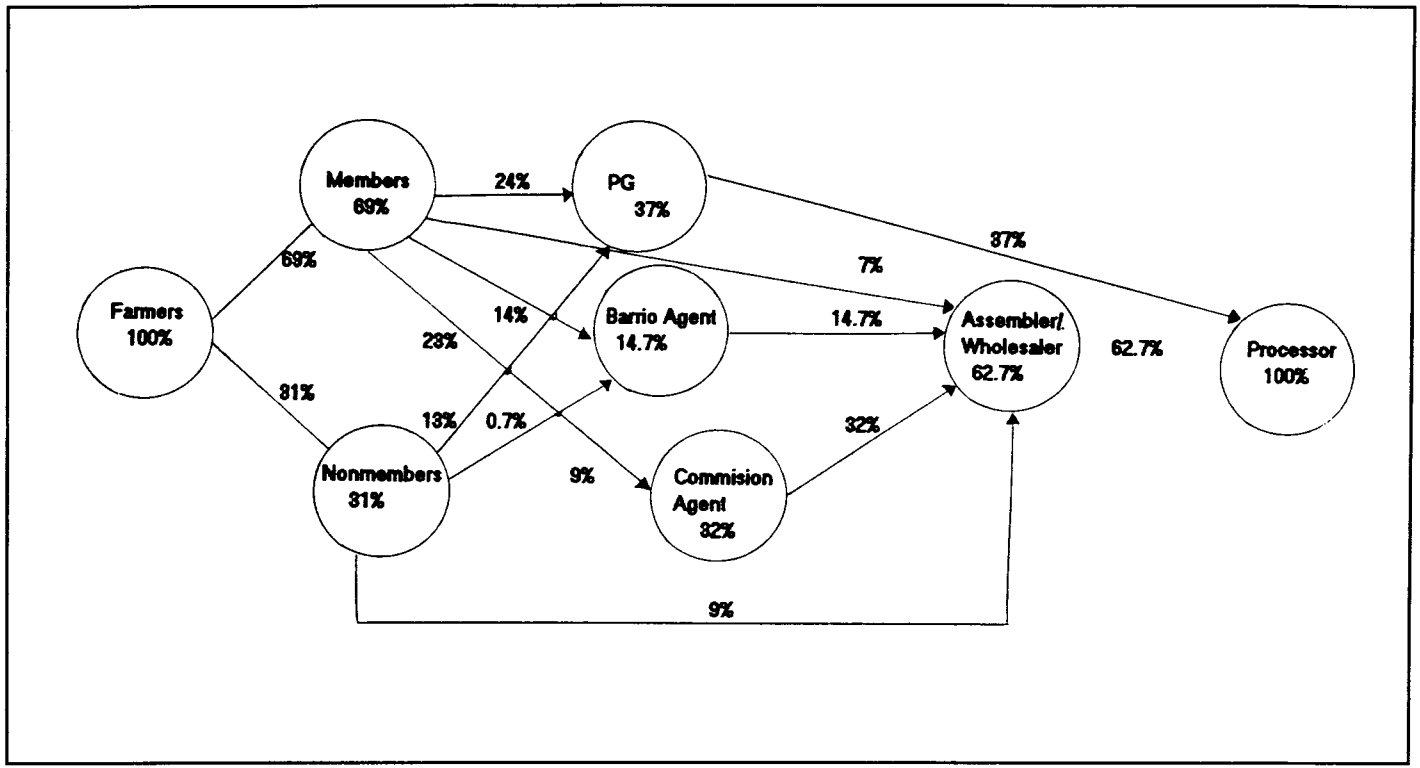

Fig. 8.9. Flow of copra for PG4 in Bicol, 1993.

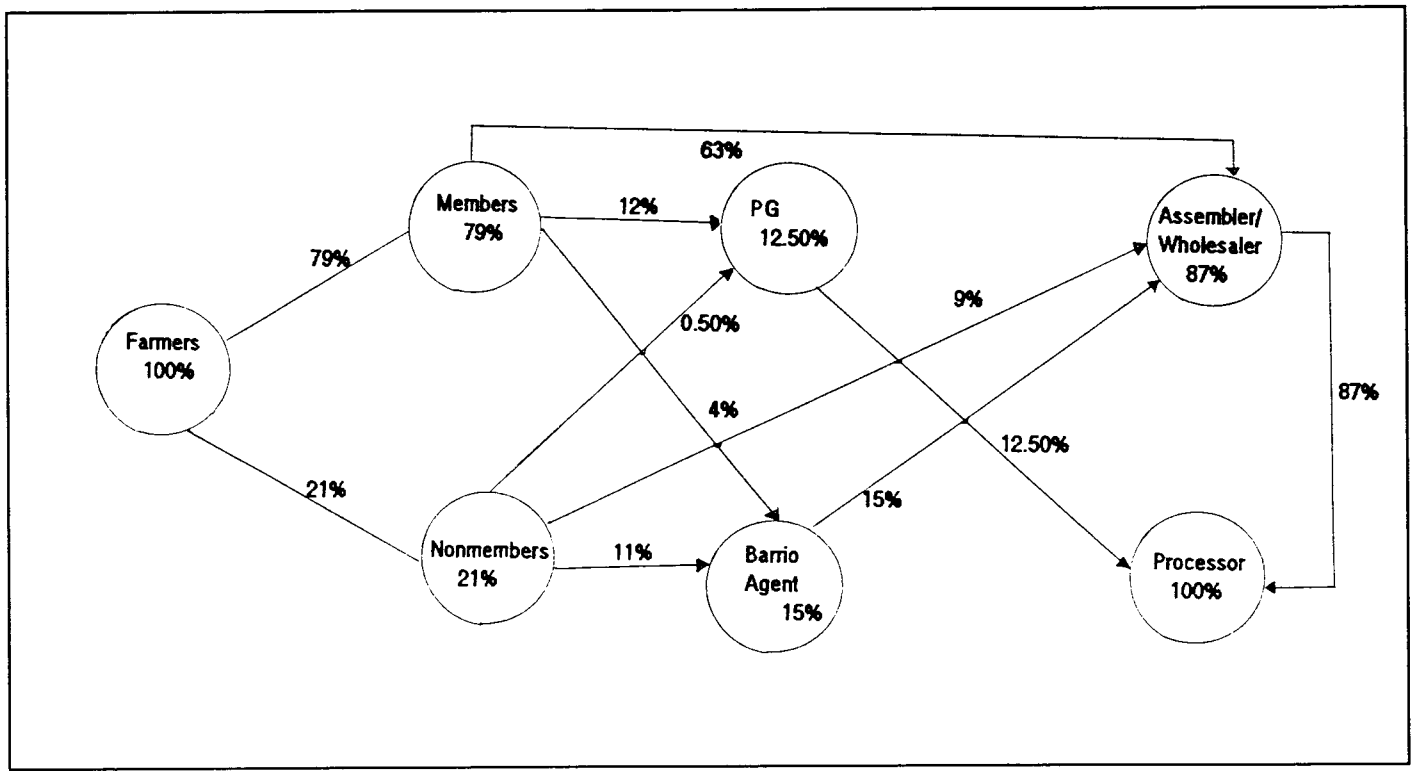

Fig. 8.10. Flow of copra for PG5 in Bicol, 1993.

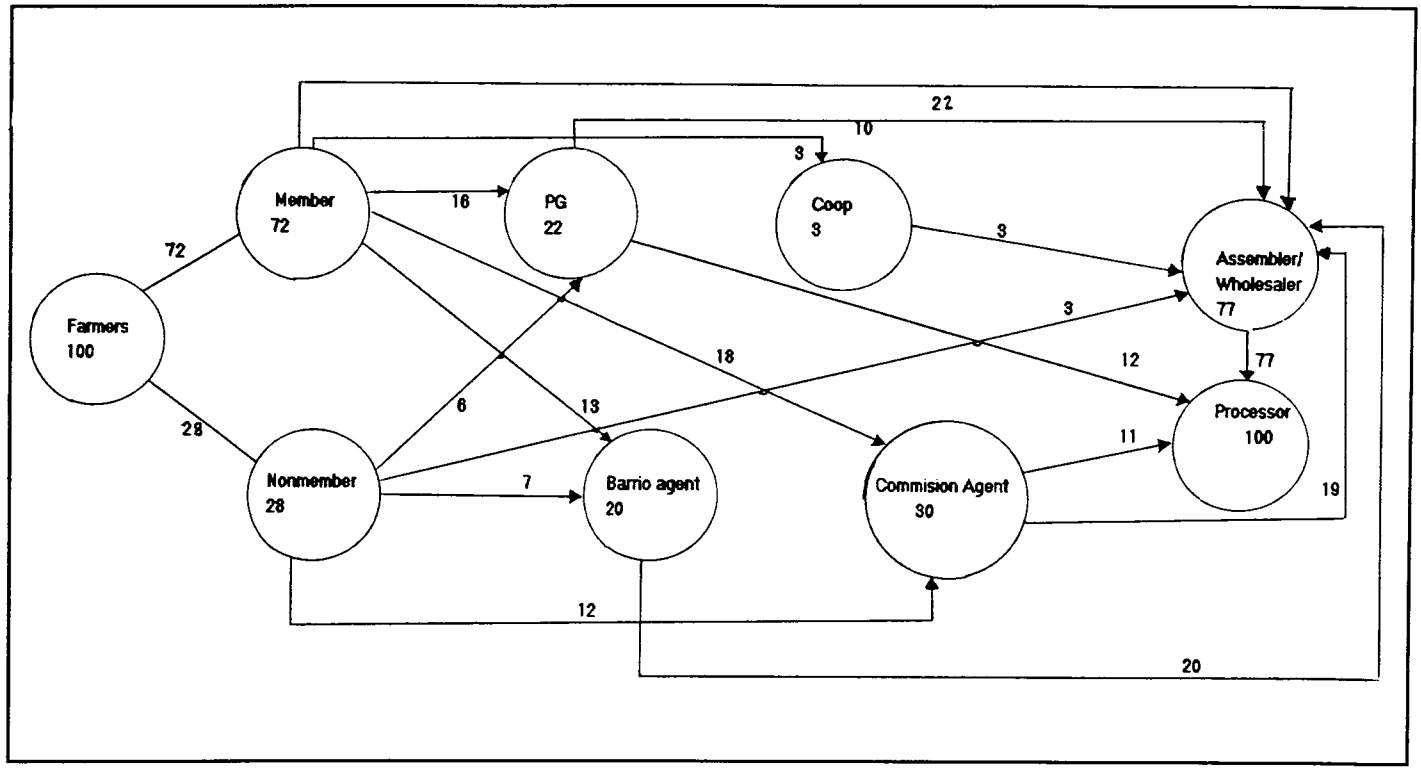

Fig. 8.11. Market channels for copra in Bicol, 1993.

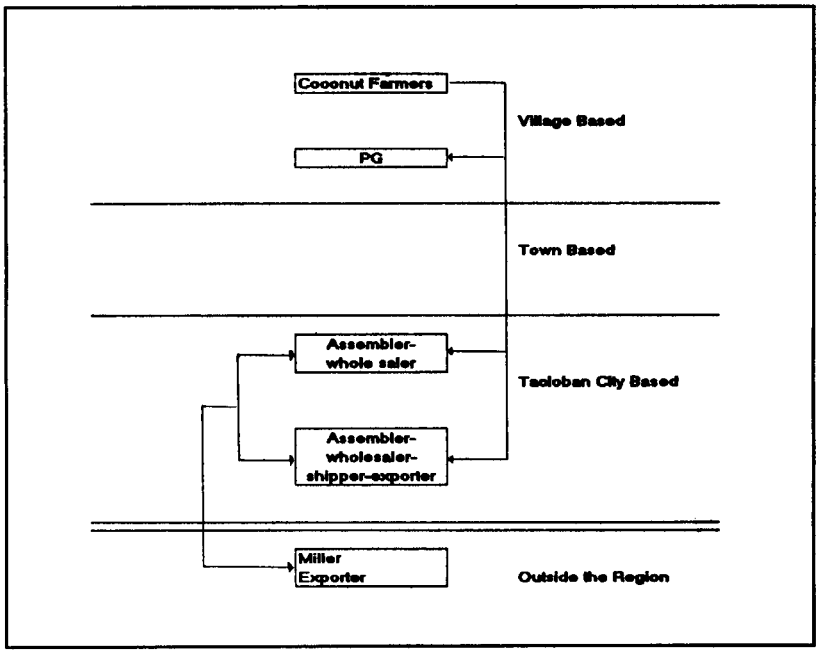

Fig. 8.12. Market channel of copra, PG1-San Joaquin, Palo, Leyte.

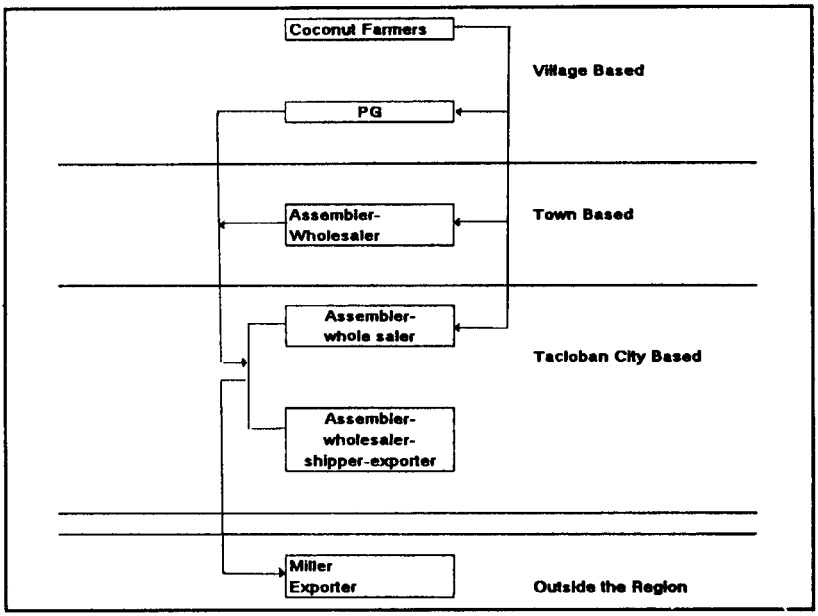

Fig. 8.13. Market channel of copra, PG2-San Gabriel, SCPO, Julita, Leyte.

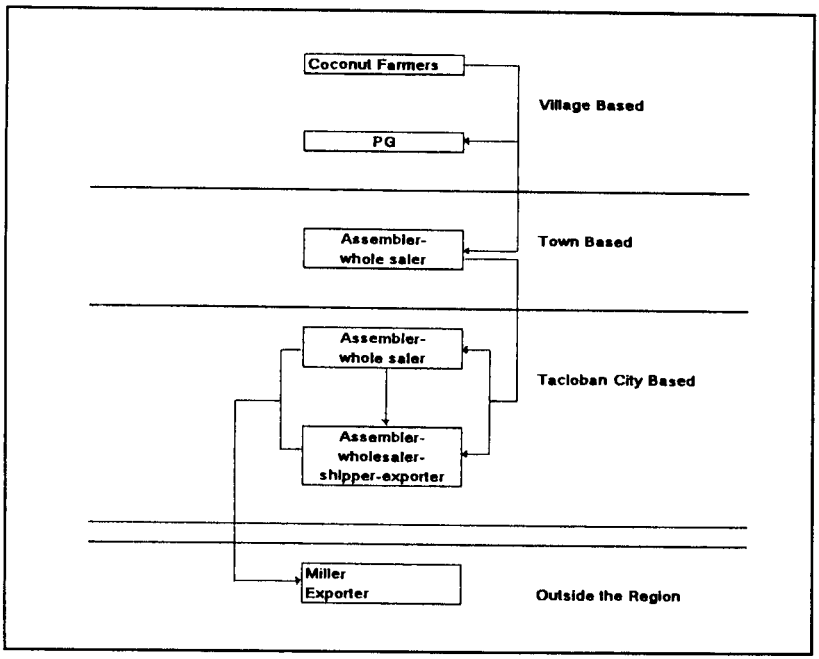

Fig. 8.14. Market channel of copra, PG3-Arado, Burauen, Leyte.

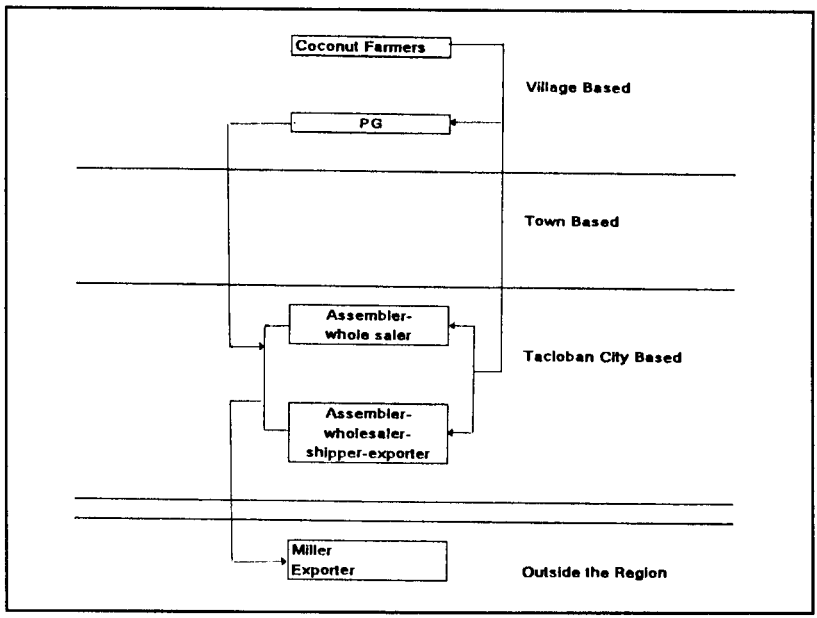

Fig. 8.13. Market channel of copra, PG4-Calipayan, North Dagami.

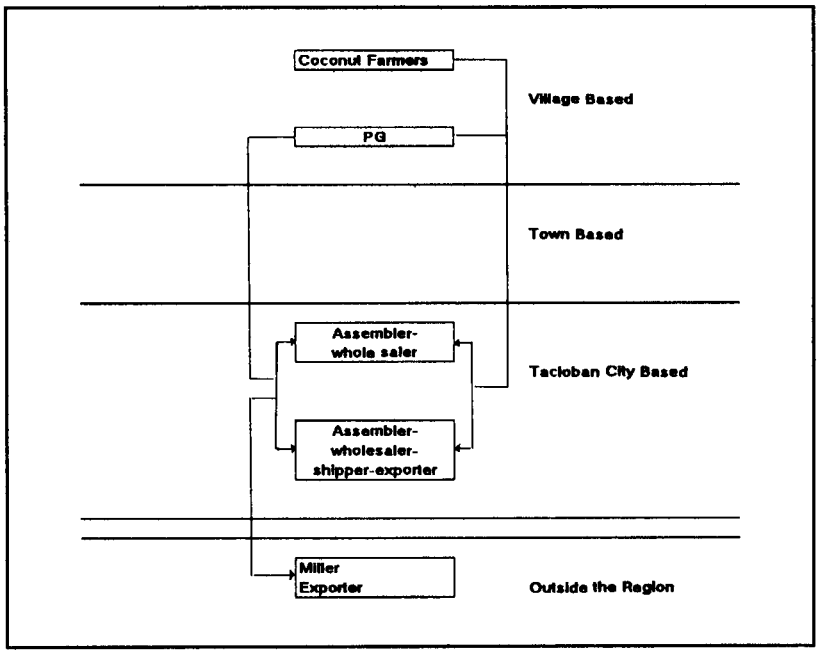

Fig. 8.16. Market channel of copra, PG5-Mitomnog, South Dagami.

Table 8.4. Proportions of members' and nonmembers' produce channeled to the Philippines, 1993.

Region	PG	Trader
Southern Tagalog		
Members	87	13
Nonmembers	15	85
All	51	49[a]
Bicol		
Members	18	82
Nonmembers	13	87
All	16	84[a]
Eastern Visayas		
Members	23	77
Nonmembers	18	82
All	20	80[b]
Philippines		
Members	43	57
Nonmembers	15	85
All	29	71

[a] Village- and town-based traders.

[b] Town- and city-based traders.

In Southern Tagalog (except for one PG which sold a very small volume) none of the PGs had direct links with processors. This means that they served only as an alternative to the trader reaching the processor. In Bicol, three PGs directly sold their copra to processors in Legaspi City. Even if this were so, however, only 18 percent of the members produce was handled by the PG.

Farmers' Attitudes Toward PGs

Farmers have various reasons for joining a PG. These included (a) availment of credit and other benefits, includingfree fertilizer being distributed by PCA through PGs, (b) prospect of increasing their income and helping other producers, and (c) being convinced by other members while others simply wanted to have a cooperative experience (Table 8.5).

Farmers also identified ways of helping the PG, primarily by supporting PG activities and selling their copra to the PG, and through participation in meetings.

Farmers seemed to have high hopes for the PG noting that it has great potential if there will be cooperation and unity among members, if it will have adequate capital for its operations, and augment their income.

Marketing Operations and Services

Marketing services performed by PGs and traders

As a marketing cooperative, the PG procured copra from farmers and was responsible for selling it. Related to this are other marketing services provided by the PG (Table 8.6).

Except for one PG in Bicol, all procured copra instead of buying nuts and processing them. This was the usual case even among traders. PGs generally served as assembly points for farmers' produce and stored the copra although short-term, until sufficient volumes had been accumulated. Sometimes, the intent of storage was to wait for a better price. One PG in Southern Tagalog sold copra daily. Another PG in Eastern Visayas had no available space for storage.

PGs in Southern Tagalog and Bicol graded the copra but those in Eastern Visayas required a minimum moisture content which if unacceptable forced them to redry the copra. In the other two regions, grading was done through visual and feel method using color and moisture content standards. Automatic deduction of 12-16 kg per 100 kg was applied if the required moisture content was not met. Southern Tagalog PGs did not redry the copra and simply allowed their buyers to make the automatic shrinkage reduction unlike those in Bicol

Table 8.5. Farmer-members' attitudes toward the copra PGs, by region, Philippines, 1993.

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
No. Reporting	103	131	83	317
			Percent [a]	
Reason for Membership				
To avail of credit/other benefits	30	32	23	29
To increase income	15	29	32	25
To help other producers	20	40		23
To have coop experience, enrich knowledge	15	4	11	9
To avail of free fertilizer	5		24	8
Convinced by other members	18	4		7
Ways of Supporting the PG				
Support PG activities	32	63	16	40
Selling product only to PG/ promote and patronize products	45	27	29	33
Complete attendance in meetings	20		55	21
Render free service		16		7
Membership campaign	6			2
Comments on PG's Potential				
PG has great potential if there is:				
unity among members	17		32	14
adequate capital	13		24	10
competent and permanent set of officers	2			1
PG addresses farmers' financial needs	33	50	11	34
PG gives additional income/ employment	20	21	27	22
PG has a good management	5		6	3
PG addresses the problems	8	21		11
No comment	5			2

[a] Exceeded 100 percent due to multiple responses.

Table 8.6. Marketing services performed by PGs and traders, by region, Philippines, 1993.

Marketing Services	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
No. Reporting	5	11	5	14	5	14	15	39
				Percent				
Procurement	100	100	100	100	100	100	100	100
Processing	0	9	20	0	0	0	7	3
Storage	80	45	100	100	80	100	87	85
Transport	60	18	60	67	100	100	73	64
Grading	100	100	100	100	0	50	67	82
Packaging	100	100	100	100	80	100	93	100
Redrying	0	9	80	100	80	86	53	69
Wholesaling	100	100	100	100	80[a]	100	93	100
Market Information	100	100	100	100	100	100	100	100
Marketing Training	0	0	0	0	0	0	0	0
Market Search/Linkaging	40	100	100	100	100	100	80	100
Financing	100	100	60	100	100	100	87	100

[a] One PG did not assemble copra in big volumes. Any volume was brought right away to buyer.

and Eastern Visayas which tried by increase sales proceeds through quality improvement.

Except for two PGs in Bicol which had just started operation, PGs provided financial support to farmers via cash advances which were often used to pay for labor expenses in copra production. Some PGs did not charge any interest while others charged 1.5 - 2.0% per month. The practice which was common even among traders was intended to ensure that farmers' produce was channeled to the PG instead of other buyers. Generally, the loan amount depended on the volume of copra to be delivered by farmers and/or their capital share. Sometimes, even with such informal arrangement, farmers did not sell exclusively to PGs, or they got more cash advances even if the original advances had not been settled. This explains increased collectibles and eventual drying-up of the PG's operating capital.

The PGs generally disposed copra on wholesale basis. Copra was packed in jute or synthetic sacks each weighing 50-60 kg. The PGs in Southern Tagalog provided the farmers with sacks which were paid in the form of 1.5-2.0 kg copra. Transport arrangements were made by the PG whether the copra was to be delivered or picked up by the buyer from the PGs' place. Public utility buses or jeepneys were the usual means of transport from the PGs' place to the buyer. Sometimes the buyer's trucks were used in case of large volumes.

PGs provided price information to farmers either by posting them in the PG offices or storage houses or by verbal communication. The majority of the PGs also tried to search for outlets, while some simply depended on their regular buyers. None of them, however, provided any marketing training to their members.

Traders performed almost similar functions as PGs, except for big-time traders sampled in Tacloban City who assembled large volumes of copra from smaller traders which were then shipped to other islands of the country and even abroad.

Marketing arrangements

PGs and traders generally had their sources delivered the copra to the office or storage place except where the farmer's place was accessible (Table 8.7). The transport cost to the PG could be as low as P1.00 - P2.00 per sack (P0.03/kg) and usually shouldered by farmers. However, hauling from the farthest and most inaccessible farm to the PG was as high as P50/100 kg by horseback. One PG in Southern Tagalog which had no permanent office reported that the manager used his own passenger jeepney to pick up the copra from the roadside from where it was directly transported to the market outlet.

Table 8.7. Buying and selling arrangements of the copra PGs and traders, by region, Philippines, 1993.[a]

Marketing Services	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
No. Reporting	5	11	5	14	4	14	15	39
					Percent			
A. Buying								
Picked-up from source	20	9	0	7	0	0	7	5
Delivered to buyer	80	91	100	93	40	0	73	59
Both	0	0	0	0	60	100	20	36
Mode of payment								
COD/pick-up	0	9	40	0	0	36	13	15
Cash advance	0	0	0	0	0	0	0	0
Both	100	91	60	100	100	64	87	85
B. Selling								
Picked-up by buyer	60	36	40	29	0	0	33	21
Delivered to buyer	40	9	60	71	80	100	60	64
Both	0	55	0	0	20	0	7	15
Mode of payment								
COD/pick-up	80	18	100	100	100	100	93	77
Cash advance	0	0	0	0	0	0	0	0
Both	20	82	0	0	0	0	7	23

[a] PGs and traders bought copra and sold as much.

Payment to farmers consisted of both cash advance and cash on delivery. In case of the former, sales proceeds were net of advances or loans.

In Southern Tagalog and Bicol, copra was mainly delivered to the buyer. This was also the dominant practice among traders. Transport cost for bringing copra to the buyer was paid by the seller (PG/trader) or market outlet depending on the arrangement. For two PGs in Southern Tagalog, copra was picked up by the buyer from the PGs' place with the latter shouldering the cost. Another PG delivered its copra to the buyer, who reimbursed its expenses. In Eastern Visayas, delivery cost was also shouldered by the sellers (PGs and traders).

Payment to the PGs and traders was primarily on cash-on-delivery basis in Eastern Visayas where copra sold was usually the "resecada" type with a moisture content of 5 percent. In the other two regions, PGs and traders could obtain cash advances from their buyers. The trader-outlet was also a PG member. Sample small traders in Southern Tagalog also asked for financial support from big-time traders.

Comparative Marketing Operations and Efficiency

Volume handled by PGs and traders

Traders handled a larger volume of copra than PGs, 840 mt versus 61 mt (Table 8.8). However, this result was largely due to that obtained from Eastern Visayas where traders handled very large volumes averaging 2,266 mt, while that of the PGs was only 22 mt. Sample traders in this region included also town- and city-based traders who operated on large-scale basis. They had adequate capital and were able to finance the operations of village traders who assured them of sufficient supply. The city-based traders' volume of business was 4,262 mt, on the average.

In Bicol, traders also had bigger vomumes than PGs, but both had relatively small volumes, 19 mt and 10 mt, respectively. In Southern Tagalog, PGs handled comparatively larger volumes than traders who were mostly village-based. Some have marketing tieups wih upper level traders, including processors. Their respective volumes were 150 mt and 72 mt, on the average.

Buying prices of PGs and traders

Buying prices of PGs were lower than those of traders which averaged P541 and P561 per 100 kg, respectively (Table 8.8). Among the three regions, it was only in Bicol where PGs paid a slightly higher

Table 8.8. Comparative marketing operations of PGs and traders, by region, Philippines, 1993.

Marketing Services	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Average Volume Handled (mt)	150.16	71.80	10.43	18.96	21.60	2,266.00	60.73	840.49
					Pesos per 100 kg			
Selling Price	631.40	639.00	610.00	674.00	621.00	673.00	620.80	663.77
Buying Price	583.00	596.20	559.00	546.00	480.00	548.00	540.67	560.88
Marketing Margin (MM)[a]								
Marketing Cost (MC)								
Transport	7.60	1.20	14.00	20.00	9.00	5.00	10.20	9.31
Shrinkage	1.08	2.00	4.00	7.00	17.30	17.03	7.46	9.19
License/Registration fee	0.20	1.52	0.20	0.13	0.32	0.11	0.24	0.65
Labor	1.20	3.40	6.00	22.00	4.60	7.67	3.93	11.61
Depreciation	1.00	2.66	10.00	50.00	0.35	1.47	3.78	19.23
Manager's fee	12.40	0.00	0.82	0.00	0.00	0.00	4.41	0.00
Commission	0.00	0.00	0.78	0.00	0.00	0.00	0.26	0.00
Sacks	1.00	2.40	0.50	0.38	0.00	0.00	0.50	0.81
Food	0.60	0.80	0.00	0.00	0.00	0.00	0.20	0.23
Others[b]	0.00	0.00	0.00	0.00	5.00	0.47	1.67	0.17
Total	25.08	13.98	36.30	99.51	36.57	31.75	32.65	51.20
Net Profit (NP)[c]	23.32	28.82	14.70	28.49	104.43	93.25	47.48	51.69
NP as % of MM	48.18	67.34	28.82	22.26	74.06	74.60	59.25	50.24
MC as % of MM	51.82	32.66	71.18	77.74	25.94	25.40	40.75	49.76

[a] Difference between selling price and buying price.
[b] Honoraria, interest, water and telephone bills, fuel and oil.
[c] Marketing margin less marketing cost.

price than traders, P559 and P546 per 100 kg, respectively. Nevertheless, a large part of the farmers' produce was channeled to traders (82%) which may be explained by the fact that cash advances were usually provided without explicit interest rate.

In Eastern Visayas, the buying price differential was P68 per 100 kg which was quite large, since sample traders included those operating in higher-level markets which offered relatively higher prices. This also explains why the market share of traders was very much larger (80%) than that of PGs.

In Southern Tagalog, the price differential averaged only P13 per 100 kg. Here, traders were located in the same location as PGs, mostly in the villages, the lowest-level market.

The buying price differentials are presented in Table 8.9. It is interesting to note that in Southern Tagalog, although average buying price of traders was higher than that of the PGs, the reverse occurred during the peak months of August, September and October.

The buying price differentials between the PGs and traders are also reflected in the selling price differentials between the farmer-members and non-members. The latter received P603 per 100 kg while the farmer numbers got P582.

Selling prices of PGs and traders

Traders sold copra at a higher price (P644/100 kg) than the PGs (P621). This was true in all three regions, but the price differentials were larger in Bicol and Eastern Visayas, P52-64/ 100 kg, than in Southern Tagalog. In Eastern Visayas, this was due to the fact that (a) traders, particularly in Tacloban City, operated in higher-level markets where prices were higher; (b) they had big storage facilities that allowed them to store their product, schedule their sales, and wait for better prices; and (c) they had drying facilities to improve copra quality which command higher prices. One trader had an improved dryer-warehouse designed to serve as storage. City-based traders had direct links with processors who offered higher prices because of bulk sales of quality copra.

Table 8.10 presents the monthly selling prices of PGs and traders. In general, prices were higher during the second half of the year.

Marketing margins of PGs and traders

The difference between the selling and the buying price is known as the marketing margin. At a given cost, a higher margin means higher profit.

PGs, on the average, realized lower marketing margins than traders, P80 and P103/100 kg, respectively (Tables 8.8 and 8.11). This was

Table 8.9. Comparative buying prices of PGs and traders and selling prices of farmer-members and nonmembers, by region, Philippines, 1993.

Price	Southern Tagalog		Bicol	Eastern Visayas	Philippines
Buying Price					
PG	680[a]	(607)[b]	559[c]	480[c]	573
Trader	704[a]	(595)[b]	546[c]	548[c]	599
Selling Price					
Farmer-member	682[a]		557[c]	508[c]	582
Farmer-nonmember	721[a]		539[c]	549[c]	603

[a] For the fourth quarter.

[b] For the peak months of August, September, and October.

[c] Average for the year.

Notes:

1 Selling price of member is not equal to the buying price of PG since members also sold to non-PG buyers. Likewise, nonmembers sold to nonrespondent buyers.

2 Prices for Southern Tagalog are not directly comparable with those in Eastern Visayas and Bicol. However, intent is to show the relative levels of prices of PGs vis-a-vis traders and farmer-members vis-a-vis nonmembers.

Table 8.10. Comparative monthly selling prices of PGs and traders, by region, Philippines, 1993.

Month	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
	Pesos per 100 kg							
January	570	571	480	517	544	576	531	555
February	589	587	470	495	530	579	530	554
March	555	559	425	485	540	630	507	558
April	563	572	460	452	506	557	510	527
May	589	588	496	540	572	618	552	582
June	607	582	537	615	608	655	584	617
July	673	617	549	532	634	692	619	514
August	670	631	549	551	652	713	624	632
September	607	587	580	595	648	711	612	631
October	605	616	585	578	656	713	615	636
November	735	779	655	650	661	725	684	718
December	915	907	825	947	890	967	877	940
Average	631	639	551	580	621	673	604	630

Table 8.11. Comparative marketing efficiency and financial viability of PGs and traders, by region, Philippines, 1993.

Item	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
				Pesos per 100 kg				
Marketing Efficiency								
Selling price	631.40	639.00	610.00	374.00	621.00	673.00	620.80	663.77
Buying price	583.00	526.20	559.00	546.00	480.00	548.00	540.67	560.88
Marketing margin (MM)	48.40	42.80	51.00	128.00	141.00	125.00	80.13	102.89
Marketing cost (MC)	25.08	13.98	36.30	99.51	36.57	32.16	32.65	51.20
Net profit (NP)	23.32	28.82	14.70	28.49	104.43	92.84	47.48	51.69
MC as % of MM	51.82	32.66	71.18	77.74	25.94	25.70	59.25	49.76
NP as % of MM	48.12	67.34	28.82	22.26	74.06	74.30	40.75	50.24
Financial Viability								
Profit								
Copra	19,717	6,263	1,721	3,017	26,337	3,124,450	15,925	2,201,370
Others	21,436						7,145	
All	41,153	6,263	1,721	3,017	26,337	3,124,450	23,070	2,201,370
ROI								
Copra	16.50	3.92	1.97	2.87	34.31	72.36	17.59	28.11
Others	6.22							
All	17.48	3.92	1.97	2.87	34.31	72.36	17.59	28.11

because the selling prices of the former were much lower than those of traders. However, in both Southern Tagalog and Eastern Visayas, margins of PGs were higher than those of traders. The margin of Bicol PGs was much lower than that of traders (P51 versus P128).

Across regions, margins were lowest in Southern Tagalog but both PGs and traders in this region paid higher prices than their counterparts in the other two regions. PGs in Eastern Visayas realized the highest margin because of low buying price from farmers averaging only P480/100 kg as compared with P583 and P559/100 kg for Southern Tagalog and Bicol respectively.

Comparative marketing efficiency of PGs and traders

Marketing efficiency was assessed by (a) examining the marketing cost for the various services rendered by PGs and traders and (b) determining the extent by which profit rates deviated from the opportunity cost of capital, including allowance for risk.

On the average, cost was higher for traders than PGs P51 at and P33 per 100 kg, respectively, even if the former handled much larger volumes of copra (Tables 8.8 and 8.11). Bicol traders had an extremely high cost of P100/100 kg. In Southern Tagalog and Eastern Visayas, PGs incurred a higher cost than traders. The lower average cost for traders in Eastern Visayas was due to economies of scale since they operated on considerably large-scale basis. This, however, was not true in Southern Tagalog where PGs had a large volume handled, but had comparatively higher cost (P25 versus P14 per 100 kg for the traders).

In Eastern Visayas, PGs handled a smaller volume of business (22 mt) and incurred relatively higher cost for transport, shrinkage and miscellaneous items (honoraria, interest, and utilities) relative to their trader counterparts. For Southern Tagalog, the high cost was due to higher transport cost and manager's fee. For Bicol, high cost items included transport, labor, and depreciation although on the whole, total cost was still lower than that of traders.

Net profit was obtained by deducting the marketing cost from the margin. Because of large margin traders realized slightly higher profit than PGs (P52 versus P48 per 100 kg) despite the higher cost.

For Southern Tagalog and Bicol, traders obtained a higher profit, for the former, because of lower cost and for the latter, to a larger margin. For Eastern Visayas, profit was higher for the PGs resulting mainly from a large margin.

Among PGs (and traders), those in Eastern Visayas realized the highest net profit mainly because of a large margin (however, they paid the lowest prices to farmers). In view of this, their net profit was quite a large proportion of the margin (about 74%). Since profits were smaller

for Southern Tagalog and Bicol, they comprised a smaller proportion of margin, 48 percent for the former and 29 percent for the latter. The lower profit of Bicol PGs resulted from high cost relative to the margins.

Annual profits of PGs averaged P23,070, with the highest in Southern Tagalog at P41,153 and lowest in Bicol at P1,721. Eastern Visayas PGs realized P26,337 which was lower than that of Southern Tagalog, even if their per unit profit was higher because of smaller volume (22 mt versus 150 mt for Southern Tagalog). As expected, profits of traders were very large averaging P2.2 million, mainly because of substantial profits realized by city-based traders in Eastern Visayas. Village-based traders in Southern Tagalog and Bicol realized very low profits.

Return on investment (ROI) is a measure of return to total assets or alternatively the return to operating capital and fixed investments. Results showed that ROIs are not high approximating only the 8 percent opportunity cost of capital (time deposit rate) and a risk factor of 8 percent in the case of Southern Tagalog. Village traders in the region realized even lower ROIs. In Bicol, ROIs were also very low. In Eastern Visayas, the ROI of PGs was higher at 34 percent because of larger marketing margin. As indicated earlier, PGs in this region paid the lowest prices to farmers. Traders had larger ROIs at 28 percent but this is only because of large returns realized by big traders in Eastern Visayas.

These results suggest that profit rates were quite low, but could have been higher if marketing cost was lower and if selling price was higher and buying price lower. The latter, however, would mean that farmers would receive even a lower price. In terms of selling price, it would seem that this can be increased if PGs would be able to reach higher-level markets as in the case of traders in Eastern Visayas where they received much higher prices. It was also mentioned earlier that higher prices were due to bulk sales and better quality copra handled by traders in that region. They had storage, drying, and transport facilities. All these provided the traders greater bargaining power with their buyers.

In summary, the PGs are in a less-competitive position with their buyers because of smaller scale of operation and inadequate facilities which may have contributed to some pricing inefficiency. Thus, it might have been possible for them to secure better prices if they had larger volume of business and possessed the necessary facilities. Some operational inefficiencies also existed in view of the high cost incurred in transport, shrinkage, and others related to maintaining the PG office and staff.

Marketing Constraints and Coping Mechanisms

PGs faced many problems in their marketing operations. Most of these are internal and unique to the PG (Table 8.12). However, the problem of low and fluctuating prices is also determined by factors other than those which are directly controlled by PGs. These may include government policies affecting the coconut industry and the agricultural sector in general and the developments in the international market. For example, relative prices in agriculture may remain low because of lack of infrastructure that limits market access. Similarly, competition from other producing and exporting countries vis-a-vis limited policy support for production of quality copra may cause Philippine export prices to be low.

PGs, most of which were newly established and therefore have limited trading experience, suffered from: (a) inadequate capital and high amount of collectibles; (b) lack of facilities; (c) declining interest of members; (d) limited volume of business; and (e) other management-related problems. All of these are interrelated and threaten the viability of the PGs as a business organization.

PGs tried to cope with the difficult situations through some short-term measures, but at least two PGs (one in Eastern Visayas and one in Southern Tagalog) stopped the trading operation because of lack of capital. Three PGs had to depend on cash advances from their trader outlets to keep the operation going.

Although PGs tried to provide cash advances to the members to ensure supply about 50 percent of them still reported that members' support was declining which partly contributed to their limited volume of business. As shown earlier, traders particularly in Bicol and Eastern Visayas, captured about 80 percent of the farmers' produce. This problem also was a direct result of inadequate capital.

Facilities needed by the PGs included those for storage, drying, and transport, as well as an office for one PG. These are essential for an efficient performance of functions as a marketing organization and to a large degree determine their market competitiveness. The town-and city-based traders were well equipped with such facilities, had much larger volume of business, and were able to reach higher-level markets which offered better prices. Comparatively, PGs and small traders could reach only the nearest market center and some has to depend on whatever transport arrangements could be made by the buyers. Even if a few PGs had direct links with processors as in the case of one PG in Southern Tagalog and two PGs in Bicol, their volume of business was so small to make a significant impact on the PGs operations and farmers' welfare.

Table 8.12. Marketing constraints and related problems and coping mechanisms of PGs, by region, Philippines, 1993.

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
		Percent Reporting		
Limited volume of copra procured	20	40	100	53
Provided cash advances to members and encourage them to sell to cooperative			100	33
PG paid loans obtained by members from traders	20			7
Continued coop education		20		7
Inadequate capital/high amount of collectibles	80	60	100	80
Reminded members to pay debts and encourage them to give their capital buildup pledge			100	33
Strengthened credit operation;	40			13
Obtained cash advances/loans from trader outlet	20	40		20
Maintained a set of officers for colection	20			7
Operated a consumer store to support copra marketing		20		7
Paid farmers after sale of copra		20		7
Declining/Lack of members' support	60		100	53
Informed members of advantage of selling to cooperative			100	33
Conducted membership campaign	20			7
None	40			13
Low and fluctuating copra prices	20	40	60	40
Contacted buyers before selling			60	20
None	20			7
Lack of facilities	100	40	80	73
Storage	20	20	40	27
Vehicle	60	20		27
Drying facilities		20	40	20
Office	20			7

Table 8.12. (Continued).

Item	Southern Tagalog	Bicol	Eastern Visayas	Philippines
		Percent Reporting		
Used members' house space and immediate sale of copra to buyer/sold even at lower price	20	20	40	27
Used manager's jeepney/hired truck to deliver copra	20	20		13
Had product picked-up by buyer	40			13
Accepted only well-cooked copra			40	13
Meetings held at members' house on rotation basis	20			7
Far from market center		40		13
Assembled large volume before selling to minimize transport cost		20		7
Poor quality of copra		40		13
Reminded farmers to cook copra properly		20		7
Separated good from bad quality copra		40		7
Presence of competitors paying a higher price	20			7
Mismanagement	20			7
New manager was appointed	20			7
No president [a]	20			7
Manager acted as president	20			7

[a] Former president had just died at the time of survey.

At least two PGs reported that their organizations suffered from mismanagement, one indicating that such had created financial difficulties for the PG.

Support Services to the PGs

PGs availed themselves of support services in various forms (Table 8.13). The majority participated in the fertilizer distribution program of the PCA, while one PG in Bicol was a recipient of the buy-one-take-one fertilizer program of DA. Some PGs in Eastern Visayas received planting materials.

Most PGs also were given training/seminars focused primarily on cooperative education/management and even technical assistance on soap and vinegar making from the Department of Science and Technology (DOST) for one PG in Bicol. One NGO in Manila also provided a training to one Southern Tagalog PG.

Two PGs in Southern Tagalog sought credit assistance from the Land Bank of the Philippines (LBP), one for the purchase of a vehicle, the other for carabao and palay production. Two PGs in Bicol and one in Eastern Visayas also received loan from LBP. One PG in Southern Tagalog, however, complained that a "grant" by an NGO turned out to be a loan that they had to repay.

Thus, except for loans availed of by some PGs which augmented their capital, no other form of marketing assistance was provided.

Benefits to Farmer-Members

PG-generated benefits

Benefits to farmer-members were those attributable to PG membership, that is, they were not available to nonmembers. They included patronage refunds and dividends, cooperative education fund, and benefits (losses) resulting from output and input price and interest rate differentials (Table 8.14). The latter was determined relative to what members would have to receive or pay had transactions been effected with an alterantive entity and or with the PG, hence the opportunity cost.

PG-generated benefits averaged P652 and P735 per farmer-member for Southern Tagalog and Bicol, respectively. For Eastern Visayas, farmers' actually lost by an average of P883 per member since the PGs paid farmers lower prices for their copra and charged them higher interest for loans compared with those of traders. Thus, on the average, benefits amounted to only P168 per member.

In Southern Tagalog, farmers also lost since they received lower prices than their counterparts who sold to traders. Moreover, PGs

Table 8.13. Support services availed of by PGs, by region, Philippines, 1993.

Service	Southern Tagalog	Bicol	Eastern Visayas	Philippines
Free Fertilizer and Planting Materials[a]	40	100	100	80
Training/Seminar on Cooperative Education/ Management Technical Assistance[b]	60	60	100	73
Information on Tax Exemption/Policies[c]			100	33
Loan/Credit Granted[d]	60	40	40	47
Old Building for Storage and Pavement for Copra Drying[e]		20	20	13

[a] Provided by PCA: planting materials only for Eastern Visayas; buy-one-take-one fertilizer from DA for 1 PG.

[b] Provided by Quezon Federation and Union Cooperatives, Inc. (QFUCI) to 2 PGs and by the Central Community Service (Ateneo de Manila) to one PG in Southern Tagalog; by PCA and DA to Eastern Visayas PGs; by DA, LGU, and PHILCOCODEC to 4 PGs; by DA, LGU, and by DOST on soap and vinegar.

[c] Provided by CDA to Eastern Visayas PGs.

[d] Provided by Land Bank to 2 PGs in Southern Tagalog, 1 PG in Eastern Visayas, and 2 PGs in Bicol; by Philippine-Australian Community Assistance Program to 1 PG in Southern Tagalog; by an NGO to 1 PG in Eastern Visayas.

[3] Old building provided by DECS to 1 PG in Eastern Visayas and pavement by UCPB to 1 PG in Bicol.

Table 8.14. Benefits to farmer-members from PGs, by region, Philippines, 1993.

Item	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member
				Pesos				
Patronage Refunds and Dividends	27,188	358	4,268	162	12,276	341	14,577	287
Coop Educ. Fund	3,958	52					1,319	17
Output Price Differential	(5,120)	(67)	239	9	(15,804)	(439)	(6,895)	(166)
Input Price Differential[a]	23,652	311	14,240	543			12,631	285
Interest Rate Differential	(151)	(2)	550	21	(28,260)	(785)	(9,287)	(255)
Total	49,527	652	19,297	735	(31,788)	(883)	12,345	168

[a] Includes value of fertilizer and planting materials distributed free by PCA.

charged interest while traders did not. Farmers, however, gained since they received free fertilizer, while nonmembers did not. Furthermore they were entitled to patronage refunds although these are left unpaid because of PGs financial problems. In Southern Tagalog, only two PGs distributed patronage refunds, while the three others were using such funds for capital buildup.

Farmers' incomes

Farm incomes were examined and compared between members and nonmembers to determine if any difference was attributable to PG membership (Table 8.15). Incomes were net of cash and noncash expenses, including opportunity cost of land if the farmer owned the land.

Net incomes from coconut were quite low averaging, only P576/farm per cropping season for PG members. In Southern Tagalog and Bicol, the net incomes averaged P457 and P920/farm/cropping season for members, respectively. Eastern Visayas farmers received relatively higher net income at P1,501 per farm. Comparatively, incomes of nonmembers were lower at P316 per farm for Southern Tagalog, P301 for Bicol and P1,065 for Eastern Visayas.

For Southern Tagalog, the difference was because of slightly higher yields for members at 195 kg/ha as compared with 179 kg for

Table 8.15. Comparison of net income from copra production of farmer-members and nonmembers, by region, Philippines, 1993.

Item	Southern Tagalog[a]	Bicol	Eastern Visayas	Philippines
		Pesos per Cropping		
Members				
Per farm	457	920	1,501	576
Per hectare	220	248	471	313
Per 100 kg	11	235	235	160
Nonmembers				
Per farm	316	301	1,065	561
Per hectare	154	81	387	207
Per 100 kg	87	148	221	152

[a] Excluding one PG which was hardly hit by a typhoon causing very low yields and a net loss.

nonmembers since production cost was almost the same. For Bicol, net income difference was because of higher yields for members (146 kg/ha as compared with 112 kg for nonmembers) and also higher price (P557/100 kg versus P539/100 kg for nonmembers).

It is not clear whether the slightly higher yield of members was because of the free fertilizer distributed by PCA through the PG. The yield differential was not significant only 16 kg for Southern Tagalog, 34 kg for Bicol, and 5 kg for Eastern Visayas. The higher price received by members in Bicol contributed to higher net income, but this could not be attributed to PG membership since, as shown earlier, only 18 percent of the members' produce was channeled to the PG. The higher price must have been received from an alternative outlet.

The net income differential between Southern Tagalog and Bicol farmers was attributed to the lower production cost in the latter, P1,025 and P661/ha respectively. Specifically, labor cost and land rent were higher in Southern Tagalog than in Bicol. In Eastern Visayas, yields were higher than in the two regions and these partly contributed to its higher income. Similarly, production cost in Eastern Visayas was lower.

Nonquantifiable benefits

PGs served as venue by which farmers were able to discuss some of their concerns and learn from the seminars (Table 8.16). This was true for 72 percent of farmer-members who attended the general assembly meeting and for 66 percent who participated in at least 10 of the 12 monthly meetings. Others attended fewer meetings, while 22 percent reported not having attended any. Nineteen percent failed to attend any training/seminars, while the rest had attended from one to three seminars.

Some members also realized their responsibility to support the PG (Table 8.17). Others expressed their satisfaction with the PG services. The majority, however, felt short of their expectations of the PGs.

Summary and Conclusions

This study examined the marketing activities undertaken by 15 copra PGs in Southern Tagalog, Bicol, and Eastern Visayas. In recent years, the government has encountered the participation of PGs in postharvest and marketing activities. Thus, this is an initial attempt to find out (a) the different services performed by PGs and compare their performance with the private traders, (b) the support services provided by GO and NGOs to PGs, (c) the constraints and problems faced by them, (d) the benefits

Table 8.16. PG activities attended by farmer-members, by region, Philippines, 1993.

Item	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
No. of Sample Farmers	103		131		83		317	
Meetings								
General assembly[a]	40	100[a]	65	50	48	94	183	72
Monthly meetings								
10-12x	93	90	70	53	46	55	209	66
7-9x	-	-	-	-	22	27	22	7
4-6x	-	-	-	-	12	14	12	4
4x	-	-	-	-	3	4	3	1
None	10	10	61	47			71	22
Trainings/Seminars								
3	13	13	22	17	2	2	37	12
1	40	39	26	20	13	16	79	25
1	24	23	50	38	64	77	138	43
None	26	25	33	25	-	-	59	19

[a] Only for 2 PGs, 3 PGs have not held a general assembly meeting as of survey period.

Table 8.17. Reasons for selling copra to PG and number of farmers who expressed satisfaction with services, by region, Philippines, 1993.

Item	Southern Tagalog		Bicol		Eastern Visayas		Philippines	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
No. of Sample Farmers	103		131		83		317	
Reasons for Selling to PG								
PG is a regular buyer	28	28	-	-	-	-	28	9
Responsibility as member	42	42	28	21	47	57	117	37
To avail of patronage refund	7	7			16	19	23	7
Support to coop dev't.	18	18	2	2			20	6
No other local buyer	-	-			7	8	7	2
PG offers high price	-	-	1	1	-	-	1	-
Members satisfied with PG services[a]								
Procurement/buying	27	27	27	21	48	58	102	32
Transportation	22	22	-	-	23	28	45	14
Financing	79	79	31	24	42	51	152	48
Price information	17	17	-	-	65	78	82	26
Consumer store	-	-	7	5	-	-	7	2
Training/Seminars	-	-	20	16	-	-	20	6
Free seeds/ fertilizers	-	-	14	11	-	-	14	4
Pricing	-	-	9	7	-	-	9	3

[a] The rest were dissatisfied.

derived by farmers from PG membership, and (e) the required policy and research support for enhancing PG participation in marketing.

Based on the above findings, the following points are highlighted:

a. PGs were registered as multipurpose cooperatives primarily providing marketing and financial assistance to members. Six PGs served as channels of the free fertilizer materials. Four PGs operated a consumer store, one of which had a mini junk shop and was engaged in hog dispersal.

b. As full-fledged cooperatives, majority were relatively young having been established in the late 1980s and early 1990s. All were operational as of the survey period, except for two which ceased operations for lack of operating capital but, in general, PGs were suffering from financial difficulties.

c. Joining the PG was primarily motivated by the desire to avail of potential benefits. Membership and capitalization had generally increased through time, the latter through infusion of external grants/loans.

d. In marketing, PGs generally assumed the role of a village trader, coexisting with other traders in their respective areas of operation. PGs, therefore, served as an alternative outlet for farmers and may have the potential of putting up competitive pressures on the farm-level markets.

e. PGs procured copra from farmers, assembled and stored it in some place, and arranged for sale to market outlets. Like traders, PGs provided cash advances to farmers to ensure supply, but the proportion of produce that was channeled to traders remained large reaching 80 percent in Bicol and Eastern Visayas indicating the inability of PGs to obtain the full patronage of members. The reasons commonly cited for diverting copra to traders were credit-marketing tieup with buyers, accessibility of outlets, and higher price offered.

f. Copra was hauled from the farm to the PG by the farmer for which his transport cost by horseback could be as high as P50/ 100 kg from the most distant and inaccessible place. Disposal of copra was arranged by the PG which may or may not shoulder the transport cost depending on the terms of sale with the buyer. Although cash-on-delivery was the usual method of payment to

the PG, some PGs were forced to obtain cash advances from their outlets to finance their buy-and-sell operations. This illustrates the common interlinked output-credit market.

g. Traders in Eastern Visayas which included those based in towns and cities had much larger volume of operation than the PGs. They had larger capital; wider area of coverage; and possessed transport, storage, drying, and communication facilities. These were lacking for most sample PGs. The scale of operation was much smaller in Southern Tagalog and Bicol, but PGs in Southern Tagalog handled a larger volume than traders.

h. PGs bought copra from the farmers at a lower price than traders and also sold to their outlets at a lower price. The exception was for Bicol where PGs bought at a higher price, but nevertheless was not successful in capturing a large part of the farmers' produce, PGs had lower marketing margins than traders and, thus, although on the average, their cost was lower, they also realized lower per unit net return. The exception was for Eastern Visayas whose margin was quite large but they bought from the farmers at much lower prices than PGs in the other two regions.

i. From the marketing efficiency standpoint, results are quite mixed far from being able to make a clear comparison between traders and PGs. In Southern Tagalog, the comparatively higher volume of operation of the PGs did not mean a lower average cost. In Bicol the volume handled by the traders was large but the average cost was much higher. In Eastern Visayas, the cost difference between the traders and PGs seemed so small to be able to conclude that traders were more efficient considering their considerably large operation. However, results point to some cost items which were quite large such as transport, shrinkage, and depreciation costs for Bicol PGs, and manager's fee, including related cost for honoraria, interest, and utilities for Southern Tagalog and Eastern Visayas PGs. Other things being the same, if these costs were lower, PGs net return would have been larger.

j. Although PGs realized positive returns, the profit rate (ROI) was quite low, particularly for Southern Tagalog and Bicol. One implication is that at the given cost and selling price they received from their outlets, the price they offered to farmers would have been the highest possible, otherwise, ROIs would have been

lower. If PGs were able to secure better prices from their outlets, their margins and ROIs would have been larger. Considering their small-scale operation and inadequacy of capital and marketing facilities, they were constrained to find the most favorable markets. This points to the fact that there is much room for improving the bargaining position of PGs in dealing with higher-level traders. Despite the ability of a few PGs to link directly with processors, their limited volume of operation posed a constraint for improving their bargaining position.

k. PGs were faced with the following constraints: (a) inadequate capital and high amount of collectibles, (b) declining members' interest, (c) lack of facilities, (d) limited volume of business, (e) other management-related problem, and (f) low and fluctuating prices. They had adopted short-term measures to cope with these problems, but at least two PGs eventually folded up because of financial difficulties.

l. Various GOs and NGOs to some extent, provided support services to PGs, including free fertilizer and planting materials, financial assistance, and seminar, but there was virtually no marketing support from any of these agencies.

m. Farmers' benefits from PGs came mainly from patronage refunds and value of fertilizer distributed free by PCA. Farmers actually incurred some loss since PGs paid lower prices than traders and charged interest on loans, while traders did not. Thus, benefits from membership were not large and for some PGs patronage refunds were yet to be distributed in view of financial difficulties being experienced by PGs.

n. Farm incomes were generally low and the slightly higher net incomes of members could not be clearly attributed to PG membership.

o. Nevertheless, PGs served as venues for discussing farmers' concerns through meetings and as conduits through which some forms of GO and NGO assistance were channeled. They performed marketing functions as well, but the number of farmers who expressed satisfaction in the way services were performed was limited to at most 48 percent for financing and even lower for other services such as procurement, transportation, and price information.

Policy Recommendations

Based on the above findings, the policy and research agenda may include the following:

a. Continuing support for PGs as marketing agents and stimulus for rural industrialization

PGs represent an alternative to village traders as marketing outlets and can potentially contribute to a more competitive village market environment. They provide other services such as financing and price information and have potential for engaging in small nonfarm economic activities.

b. Specific support in financing, postharvest facilities, management, and human resource capability building

Financial assistance by GOs and NGOs must be complemented by genuine efforts to assist PGs in managing such resources, but most importantly in enhancing entrepreneurial capability. The basic problem still rests on the lack of managerial skills to run cooperative ventures with full support, cooperation, and continuing interest of members. This calls for a strong and effective extension and education service that would assist PGs from organization to the many aspects of managing a business organization.

c. Strengthening of cooperative federations

Some PGs are quite small and may not be economically viable in undertaking marketing activities individually. These may have to remain as assembly points, but linkage and marketing to final outlets will have to be undertaken by bigger cooperatives. In most cases, small PGs also sell to traders in the village and further add to the market chain and are not able to directly link with processors/oil millers.

d. Close coordination among GOs (PCA, LBP, CDA, and DA) and NGOs in providing support services to PGs

While PCA has encouraged the development of coconut PGs, this should be well coordinated with CDA for management support, with LBP for financing, and with DA and DTI for marketing assistance. A broader and stronger role for the cooperative

development officers with complementary logistical support should be considered.

e. Improvement of database on coconut cooperatives and continuing research for assessing PG marketing performance vis-a-vis the entire marketing system

The present study is an initial attempt to analyze PG marketing. A continuing research effort in this area is needed both in depth and area coverage. CDA needs to link up with research institutions and discuss research agenda relevant to their mandate. A research arm for CDA may be considered to provide more focused support for policy analysis.

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Part IV

Livestock

Chapter 9

Marketing of Cattle by Small Producer Groups in Southern Tagalog

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Introduction

The Philippine beef cattle production is currently dominated by smallholders operating on backyard scale. By most indications cattle raisers are numerous and spatially dispersed with 29 percent in Northern Luzon, 2 percent in the Visayas, 18 percent in Southern Tagalog, and 13 percent in Mindanao. Smallholders or backyard raisers account for more than 90 percent of the country's total cattle production with the remainder in the hands of commercial cattle raisers. Commercial operators can be further divided into producers and feedlot operators. Recent survey indicates a positive growth in backyard cattle production, while commercial production has been declining over the years (Taylor 1994). With an annual growth rate of 2.69 percent, this subsector contributes about P1.5 billion annually to Gross Value Added (GVA) in agriculture.

Of the 13 regions, Southern Tagalog remains to be a major cattle producer, with Batangas having about 60,000 head. Its relative proximity to Metro Manila, the major meat-consuming and feed-processing region in the country, provides a natural advantage relative to other regions. There are indications of production efficiency, particularly for feedlot and backyard operations, but the inadequate provision of infrastructure facilities for meat processing, cold storage, and market information, has resulted in significant marketing costs (Rosegrant and Gonzales 1991). At the same time, the lack of well-defined and sustained government policies deters long-term industry planning and discourages production and investments in trading.

Beef accounts for 15 percent of the country's meat supply. The meat per capita consumption of 1.71 kg/year exerts a tremendous pressure on the already declining cattle inventory of about 1.9 million in 1994. In 1993, beef production amounted to only 125 thousand mt but consumption was more than 142 thousand mt with the deficit sourced, through imports. The country simply cannot meet the growing demand for beef because of the increase in population and real per capita income, beef being highly income elastic. The rise in the demand-supply gap has resulted in a faster slaughter rate of cattle more than the production growth. As a stop-gap measure, the government has allowed the importation of live cattle and beef of about 93,717 head and 17,281 mt in 1993, respectively. This situation has resulted in gains in wholesale prices which grew at the rate of 9.3 percent yearly. But beef import prices have been declining at the rate of 4.1 percent annually from 1980 to 1991 (Manzo and Tanguin 1992). The decline in world prices relative to the growth in domestic prices partly explains the rise in beef imports and the perceived uncertainty in domestic production.

With the country's accession into the World Trade Organization (WTO), a new dimension of uncertainty has evolved in the industry considering that it will now be exposed to the vagaries of world trade. Feeder cattle originally tariffied at 3 percent will now be imposed a 20 percent levy in 1995 with a bound rate of 10 percent in 2000. Likewise, beef imports taxed before at 30 percent will be increased to 60 percent in 1995 with a bound rate of 40 percent in 2000 (Gonzales 1994). Essentially, feedlot operators are disadvantaged by this offer, but the agreement favors growth in domestic production, particularly for cattle bred domestically. The long-term view of the national policy is to gradually reduce import dependency and at the same time build the breeding herd program. This is quite evident in the Medium-Term Livestock Development Program (MTLDP) of the Department of Agriculture (DA) which plans to import 365,000 head of breeder cattle between 1994 and 1998 with the goal of doubling the cattle numbers by 1998.

Since production is dominated by smallholders, the efficiency within which cattle growers can produce and market the commodity will play a crucial role to our competitiveness in the world market. Improvements in marketing efficiency are easily translated into economic opportunities through lower prices and good product quality. But the benefits accruing to these improvements are seldom realized by small farmers as their responsibility ends after sale at the farm gate. For reasons of limited resources and market information, small producers seldom perform activities in the marketing chain and it is still the private cattle traders that presently play key roles in product distribution.

Considering their fewness and large investments, the traditional view of traders exploiting small producers may very well be evident. For large commercial farms that are horizontally and vertically integrated with contract growing schemes, the benefits of marketing efficiency are easily translated into economic opportunities. Their presence, however, contributes further to the concentration and thinness of the independent producers market. For small producers operating on a backyard scale and faced by an oligopsonistic market, choices are becoming limited so are the benefits.

The uncertainty of markets and risks, the presence of oligopsony power, and the variability in prices and income are already sufficient motivations for producers to group and vertically integrate to raise producers' utilities (Sexton 1986). The integration may either be upstream (a purchasing cooperative) or downstream (a marketing cooperative) the main purpose of which is to mitigate the potentially adverse oligopsonistic structure of the market and attain greater economies of scale (Sexton 1990). The government currently supports the formation of cooperatives in the country. The implementation of Presidential Decree (P.D.) 175 hastened the formation of these producer groups (PGs) with federated structures. Certainly those who, under any realistic assumptions about horizontal and vertical integration, will never be efficient have to be eased out. But, for small producers who can be competitive by operating as a group need to be sustained in the industry and need to be helped during the integration process.

The formation of these PGs to undertake functions in the marketing chain is a cooperative strategy to mitigate the ill-effects of an oligopsonistic market and enable small producers to coexist with other firms. It is an alternative marketing scheme that distributes the benefits to a larger number of market participants providing a "yardstick of competition" in pricing and resource use.

The economic performance of PGs in marketing agricultural products has yet to receive formal attention in the country today. In most analyses, these groups or cooperatives have been treated like an ordinary trader performing marketing functions without recognizing the social and economic impact of such schemes on the well-being of individual producers. The purpose of this study is to characterize formally the performance of PGs marketing cattle products in the Southern Tagalog region. It emphasizes the marketing efficiency of PGs as compared with other existing market structures in the chain and its implications on the general well-being of its members. This chapter presents the results of this study.

Statement of the Problem

The proliferation of traders in the marketing chain, and the very limited participation by small producers in product distribution have continuously exerted a downward pressure on farmers' income. With very limited market information and resources, small producers most often fall prey to unscrupulous traders, thereby, transferring the potential economic opportunities that can be realized through efficient marketing. The formation of PGs or farmers' organizations to perform marketing functions can, therefore, be viewed as a collective strategy to spread out the benefits of efficient marketing and enable farmers to avail themselves of better prices for their produce.

The central issue, therefore, is whether these PGs can perform the marketing functions and services efficiently. Competing in the traders' market will be difficult and costly considering that regular traders have already the experience and resources needed for trade. Likewise. the level of management at which this collective action is operated will determine, to a large extent, the expected income derived by members. While economic welfare is enhanced through the collective action, the success of these PGs will still depend on the efficiency at which these groups operate in the traders' market.

Objectives of the Study

The study aims to analyze the performance of various PGs and rural-based farmer-managed organizations engaged in the marketing of cattle in Southern Tagalog.

Specifically, the objectives are to:

1. provide an overview of the production marketing-consumption system for cattle;
2. determine and analyze the various marketing services on cattle performed overtime by these groups;
3. evaluate and compare the marketing efficiency of these organizations with alternative marketing channels/institutions;
4. identify and determine the effect of support services and other related infrastructure and policies on PGs;
5. analyze various marketing constraints and problems and determine the PGs coping mechanisms;
6. evaluate the impact of these marketing groups/ organizations on the social and economic well-being of farmer-members;

7. recommend some policy agenda/actions to improve the overall performance and economic efficiency of these marketing groups; and
8. develop possible research policy linkages to enhance research results utilization.

Methodology

The study collected and analyzed cross-sectional data from primary survey of PGs, private traders, and other participants of the cattle marketing chain in Southern Tagalog. An in-depth documentation through key informant interviews were made to analyze the various marketing functions performed by market participants and compare the efficiency at which these functions are performed. Secondary data were also collected to complement the micro data with the macroeconomic profile of the industry.

For this report, the survey data covered only one commodity (cattle) from five study areas in the provinces of Batangas and Quezon. These areas were selected based primarily on the existence of PGs involved in the marketing of this commodity. To identify sample PGs or cooperatives, initial visits were made to all prospective groups and information were gathered with regards to commodities handled, market functions, area served, and market linkages. Some PGs were not directly performing downstream marketing activities, but concentrated more on the upstream. This considerably narrowed the size of the sampling frame.

Selection of Respondents

Producers in the areas were categorized into two strata: members and nonmembers. The listing of members was taken from the cooperative, while for the nonmembers, the list was obtained from the local barangay head and the municipal agricultural officer. Producer-respondents were selected using the simple random sampling scheme. Data collected at this level generally included production and disposal, prices and costs, financing, marketing services and problems, and perceptions about PGs.

Sample producers were asked on their first handler commodity outlets which were also subsequently asked on their market outlets. This process was repeated in the marketing chain until the product reaches the ultimate user or is shipped out of the region. The list of all the traders by type comprises the traders' sampling frame with samples drawn from each type of trader using simple random sampling.

This procedure is necessary to be able to compare alternative marketing chains for a commodity where one chain includes the PG or

marketing cooperative. Through this,specific cost advantages and efficiency of PGs can be analyzed vis a vis a comparable trader with similar functions. The total number of respondents interviewed is shown in Table 9.1.

Table 9.1. Breakdown of sample respondents by location, Southern Tagalog.

Location	PG	Trader	Member	Nonmember
Batangas				
PG1	1	5	20	10
PG2	1	3	20	10
PG3	1	5	20	10
Quezon				
PG4	1	3	20	10
PG5	1	0	10	10

Analytical Procedure

The analytical procedure adopted for this study is outlined into three major sections based on the specific objectives of the study.

First, the specific marketing functions/services performed by the PG vis a vis the region trader were compared in terms of the conduct and costs incurred. A detailed cost-and-return analysis was done for each type for comparative purposes.

Second, the marketing efficiencies were analyzed using operational and pricing efficiency measures. For operational efficiency, costs of performing the marketing service, capacity utilization, and the magnitude of losses were used as indicators. The analysis of the price spreads (marketing margin) was used to determine pricing efficiency. In addition, the financial performance of PGs was analyzed in terms of return to investments, profits, level of assets and liabilities, and liquidity ratios as additional determinants on the financial capability of the group to perform sustained marketing operations. The extent by which these groups were able to capture a larger market share relative to existing alternative channels was examined as this can indicate the level of participation by each group.

Third, the impact of existing support services and policies and the impact of the association on the economic well-being of farmer-members were quantified in the form of added benefits, reduction in marketing cost, and incentives and technical assistance.

Empirical Results

Cooperative Profile in Southern Tagalog

Southern Tagalog has a total of 3,042 confirmed/registered cooperatives (Table 9.2). About 83 percent of these cooperative are multipurpose in nature. The rest are credit cooperative (7%), and consumer, production, marketing, service, laboratory, union, federation, and community rural bank. The dominance of the multipurpose type has been conditioned by the need for more services and, at the same time to provide some cushion on the liquidity of the cooperative.

Of the 3,042 cooperatives in Southern Tagalog, Laguna has the highest member (16%) followed by Quezon (15%), Batangas (14%), and Rizal and Cavite (10%), respectively. Aurora and Romblon have the lowest number of cooperatives in the region. It was observed that progressive provinces in the region have the highest number of cooperatives. It was noted, however, that cooperatives involved in cattle marketing were quite limited and mostly were located in Batangas, Laguna, and Quezon.

Community Profile of the Study Area

The Southern Tagalog Region is located in the southern part of Luzon. It is near Metro Manila, the major trading capital of the country and the center of most industrial activities. But even with this setting, agriculture remains to be the main source of income and employment in the region. The more progressive provinces include Laguna, Batangas, and Quezon contributing a large share of the gross domestic product (GDP) in the region. Table 9.3 provides a brief community profile of these cooperatives.

Producer group 1 (PG1) is situated in Soro-Soro Ibaba, Batangas City. It is more enterprising and integrated compared with other cooperatives. Added to its regular functions of financing and retailing is the operation of a feedmill with a rated capacity of 3.5 mt per day. More benefits are offered to producer members considering the large capitalization and business operation. Membership has tremendously grown from a mere 24 to more than 900 today. It maintains a contract growing scheme with its members for 45 hogs, 600 broilers, and 2 head of cattle in one production cycle. The PG also serves as the first buyer of the members' produce. With excess earnings, the current plan is to go further in downstream activities to integrate the meat processing function. It presently competes with eight traders in the area producing about 75 head of cattle.

Table 9.2. Cooperative profile in Southern Tagalog, 1993.[a]

Province	Credit	%	Consumer	%	Product	%	Marketing	%	Service	%
Aurora	2	1	0	0	1	3	0	0	1	1
Batangas	39	18	10	26	6	19	10	20	7	10
Cavite	49	22	3	8	2	6	11	22	8	12
Laguna	30	14	11	28	8	26	7	14	18	27
Marinduque	2	1	2	5	0	0	1	2	0	0
Oc. Mindoro	5	2	1	3	1	3	2	4	3	4
Or. Mindoro	8	4	1	3	0	0	1	2	2	3
Palawan	10	5	4	10	3	10	12	24	4	6
Quezon	46	21	3	8	2	6	3	6	8	12
Rizal	27	12	4	10	7	23	2	4	15	22
Romblon	0	0	0	0	1	3	1	2	1	1
Total	218	100	39	100	31	100	50	100	67	100

Table 9.2. (Continued).

Province	Multi-Purpose	%	Laboratory	%	Union	%	Federation	%	CRB[a]	%	Total	%
Aurora	89	3	0	0	0	0	1	3	0	0	94	3
Batangas	332	13	0	0	1	11	5	15	1	25	411	14
Cavite	221	9	0	0	1	11	3	9	1	25	299	10
Laguna	413	16	0	0	2	22	7	21	1	25	497	16
Marinduque	125	5	0	0	0	0	0	0	0	0	130	4
Oc. Mindoro	258	10	0	0	1	11	5	3	0	0	276	9
Or. Mindoro	147	6	0	0	1	11	2	6	0	0	162	5
Palawan	249	10	0	0	1	11	4	12	0	0	287	9
Quezon	394	15	1	100	1	11	3	9	1	25	462	15
Rizal	257	1	0	0	1	11	3	9	0	0	316	10
Romblon	104	4	0	0	0	0	1	3	0	0	108	4
Total	2,589	100	1	100	9	100	34	100	4	100	3,042	100

[a] Cooperative Development Authority.
[b] CRB-Community Rural Bank.

Table 9.3. Community profile of cattle PGs in Southern Tagalog, 1993.

PG	Name of village (location)	Volume of Production	Number of Study Farmers	Marketing Agents		Marketing Outlets
		Livestock in the Study Area (Head)	Livestock Farmers Under Study	PGs	Traders	
PG1	Soro-Soro Ibaba Dev't Coop, Inc. (Soro-Soro Ibaba Batangas)	75	20	1	8	Auction markets in Batangas City, Padre Garcia, Lipa, and Tanauan
PG2	Luyos Dairy Multipurpose Cooperative (Tanauan, Batangas)	29	20	1	3	Auction markets in Padre Garcia, Lipa, and Tanauan
PG3	Banga Multipurpose Cooperative (Talisay, Batangas)	32	20	1	5	Auction markets in Padre Garcia, Lipa, and Tanauan
PG4	Sta Lucia Multipurpose Cooperative (Dolores, Quezon)	30	20	1	3	Auction markets in Padre Garcia, Lipa, and Tanauan
PG5	Bukasi Multipurpose Cooperative, Inc.	14	14	1	0	Auction markets in Padre Garcia, Lipa, and Tanauan

Producer group 2 (PG2), on the other hand, is about 74 km south of Metro Manila (Tanauan, Batangas) and about 9 km of the town proper. The barangay is on a fertile land and slightly rolling topography. The area has a sandy loam type of soil suitable for crop production such as sugarcane, coconut, upland rice, vegetable, and corn. Also poultry and livestock are predominantly raised in the area. The presence of the Tanauan Livestock Auction Market helps facilitate the livestock trading activities in the area. The PG serves the input, consumer, and credit needs of the members. There are also three cattle traders servicing the area.

Producer group 3 (PG3) is located in Talisay, Batangas which is about 78 km away from Metro Manila and was initially organized by DA and the Philippine Coconut Authority (PCA) as a Samahang Nayon in 1988. In 1990, with the assistance of the Land Bank of the Philippines (LBP) the cooperative was able to participate in the cattle dispersal program of the government. With its abundant resources, the area is suited for agricultural crops such as coconut and banana. Also, poultry and livestock are quite popular in the area because of its proximity to Tagaytay City. Fishing is also a major source of livelihood aside from farming and animal raising. Nearness to the Taal Lake encourages the residents to undertake fishing activities.

Producer group 4 (PG4) is in Dolores, Quezon. It is about 15 km east of San Pablo City. In 1991, it participated in the cattle dispersal/ fattening project sponsored by the LBP under the Multi-Livestock Dispersal Program. PG4 was organized by the DA as a cooperative in 1986 with an initial membership of 31. Today, it operates on a capital of P48,000 with 48 members. The area served is located near Mt. Banahaw, and with its sloping topography the place is suited for agricultural crops such as coconut, corn, sweetpotato, and cassava. Livestock raising such as cattle, hogs, and chicken is quite popular in the area.

Producer group 5 (PG5) operates in the northernmost portion of Tiaong, Quezon. The area is basically agricultural with about 120 families farming 1,700 ha. Farms are small and planted usually to coconut, sweetpotato, and gabi. Poultry and livestock growing is widely practiced in the area on a small holder type of production system. There is only one cooperative in the village. PG5 was founded in 1988 as a consumer and credit cooperative. In 1989, it participated in the cattle fattening project of LBP as part of the Multi-Livestock Dispersal Program of the government. Presently, cattle production and marketing is a major activity and source of income supporting 30 head of cattle in one production cycle. It extends credit and educational and death benefits to members and continuously supports training on cattle production.

Marketing assistance to members is also being promoted, particularly in the purchase of inputs and disposal of produce. It has 325 members and operates on a capital of P450 thousand. Cattle traders do not serve the area as cattle is marketed directly to the auction market in Padre Garcia, Batangas.

Characteristics of PGs

Table 9.4 provides the basic information of the five cattle PGs in Southern Tagalog. The PGs were established in various years with PG1 (Soro-Soro Ibaba Development Cooperative, Inc.) being the oldest and PG3 (Banga Multipurpose Cooperative), the youngest. PG1 was established in 1969 as a Samahang Nayon and is now engaged in feed milling, input retailing, and relending/financing. On the other hand, PG3 was established in 1988 as a farmer organization, but now actively engaged in the production and marketing of cattle and artificial flower.

Initial capitalization of the five cattle PGs ranged from P1,050 to P150,000. The first two had an initial capitalization in the amount of P11,800 for PG1 and P150,000 for PG5. PG5 had the highest initial capitalization, while PG2 had the lowest. Current capitalization ranged from as low as P48,000 to as high as P27.9 million. PG1 had the highest increase in capitalization, while PG4 had the lowest.

The PG in Quezon showed the largest registered membership, 31 for PG4, while only 15 for PG5. This was followed by PG3 with 30 members, and PG2 with 25, and PG1 with 24, original members. At present, membership had increased in all of the five PGs, with PG1 registering the highest number of members (984), followed by PG5 (325), PG3 (110), and PG4 (48). The last, PG2 had only a slight increase in membership from the original 25 to 37 active members.

Nonmembers were not served fully by all PGs. Average servicing for all the PGs was 80.5 percent for members and 13.5 percent for nonmembers. The proportion of nonmembers served was highest in PG4, followed by PG1 (Table 9.5).

The purpose for organizing the cooperative was mainly (1) to alleviate the poor condition of the farmer-members by augmenting their income through other activities such as cattle fattening; (2) facilitation of the credit needs of the farmers; and (3) availment of low-interest financial support from government agencies.

Marketing Services

The various marketing services performed by the PGs ranged from input procurement to retailing, some of which duplicated other traders'

Table 9.4. Characteristics of 5 cattle PGs in Southern Tagalog, 1993.

Characteristic	PG1	PG2	PG3	PG4	PG5
	Soro-Soro Ibaba Dev't Coop, Inc	Luyos Dairy Multi-purpose Coop	Banga Multi-purpose Coop	Sta Lucia Multi-purpose Coop	Bukasi Multi-purpose Coop
Year Established	1960	1986	1988	1986	1987
Capitalization (P)					
Initial	11,800	6,000	30,000	1,050	150,000
Current	27,853,524	300,000	14,000,000	48,000	450,000
Farmer Served					
Member	20	27	63	48	30
Non-member	0	0	0	13	0
No. of Members					
Original	24	25	30	31	15
Present	984	37	110	48	325
Objectives for Organizing	To help alleviate the poor condition	To have an access to financial assistance and financial lower feeds	To have an access to financial assistance and raw materials	To have an access to financial assistance	To facilitate the needs of the farmer

Table 9.5. Number and proportion of farmer-members served by cattle PG in Southern Tagalog, 1993.

	Farmer-Member			
	Total No. of Members	Number Served	Percent	Nonmember Served
PG1	984	20	2	0
PG2	37	27	73	0
PG3	110	63	57	0
PG4	48	48	100	13
PG5	325	30	9	0
Avg. PG	301	38	48	3

services in the area (Table 9.6). The intention is basically to increase the farmer's share of what consumers pay for the commodity. Because of the smallness and of limited access to market information, producers remain vulnerable to traders' exploitation, notwithstanding the consequences posed by an oligopsonistic market. Markets for these small producers are often thin, but through the cooperatives the uncertainty on markets and prices is tremendously reduced.

Almost similar marketing services were observed in the five PGs, except for transport and processing services for PG2, PG3, PG4, and PG5. The procurement services involve inputs, i.e., feeds and medicines and output sourcing. Not all PGs provided transport in disposing or retailing their commodities in distant markets, except for PG1. Other services included financing a 30-day credit line, retailing,market information, training, technical support, and market searching of products in alternative markets.

Almost all PGs interviewed provided marketing services to their members, i.e., farmer-members had the option to sell to the PG and, at the same time, avail themselves of its marketing services. In most cases, they were selling to the PG as their cattle stock was sourced through the financing scheme of the PG. These services are needed to help the members have an edge in marketing their produce. Aside from the marketing services, PGs provided technical and financial assistance with the help of outside institutions, particularly DA, Department of Science and Technology (DOST), Department of Trade and Industry (DTI), and LBP. Some private firms such as feed companies like Vitarich, Purina, and Mega Feeds also provided some services. Processing was not performed by all PGs because of inadequate capital to purchase the processing equipment. The grading commonly practiced in all areas was the eyeball method where an ocular inspection of the cattle was required.

Table 9.6. Marketing services offered by cattle PGs, Southern Tagalog, 1993.

Services	PG1	TR1	PG2	TR2	PG3	TR3	PG4	TR4	PG5	TR5	All PGs	All Traders
Procurement	/	/	/	/	/	/	/	/	/	/	5	5
Transport	/	/	x	x	x	x	x	x	x	x	1	1
Processing	x	x	x	x	x	x	x	x	x	x	0	0
Grading	/	/	/	/	/	/	/	/	/	/	5	5
Financing	/	x	/	x	/	x	/	x	/	x	5	0
Retailing	/	/	/	/	/	/	/	/	/	/	5	5
Market Information	/	/	/	/	/	/	/	/	/	/	5	5
Training	/	x	/	x	/	x	/	x	/	x	5	0
Technical Support	/	x	/	x	/	x	/	x	/	x	5	0
Market Searching	/	/	/	/	/	/	/	/	/	/	5	5

a/
/ = Performed.
x = Not performed.

Marketing Arrangement

Marketing arrangements are necessary to facilitate the distribution and the services provided by PGs. These are arrangements binding the buyer and the seller on the conditions of sale, i.e., delivery, method of payment, and quality. Input and output buying and selling arrangements were frequently practiced to facilitate sale, but buyers delayed payments of one to two weeks to allow time to dispose the animals (Table 9.7). It is interesting to note that all PGs looked for market outlets outside the area, mostly in the nearby auction markets where prices were favorable. This practice was widely adopted by PGs to avail themselves of better prices for members than what ordinarily barrio buyers offer in the area. For PGs 3-5, the cooperative was also selling to other traders in the locality when prices offered were high. Also, "paiwi" system was widely practiced in the area. For this arrangement, PGs provided stocks and production inputs such as feeds and medicine to farmer-members. The farmers' share included labor in caring for the animals and the farm buildings. In return, a 50%-50% arrangement on the net return was shared by the PGs and farmer-members. Selling was mostly done on pick-up basis with the payment either in terms (PG1) or cash.

Buying arrangements were commonly on picked-up and cash sale bases. Farmers informed the cooperative when their cattle was ready for sale. Cattle was picked up from the farm once the cooperative has already contacted a buyer. The transport facilities were usually provided by the cooperatives.

Marketing Operations

Marketing operations performed by PGs concentrated mostly on activities that facilitated the immediate sale of the animals. There are two reasons for this behavior. One, very little investment had been placed on transport, storage, and processing facilities that would enable the cooperative to perform temporal arbitrage. And two, there is a need for a quick turn around of capital to serve other cooperative members. PGs were practically dominated by farmers, hence, were risk averse. Investing a large amount of capital on marketing facilities creates some degree of uncertainty considering the perishable nature of the commodity and the comparative disadvantage in trading. As part owners of the animals, very little is gained in holding the animals notwithstanding the immediate need for cash by the farmers.

Marketing operations performed by the PGs were procurement, transport, and financing. To some extent, market information and training were also provided while others furnished support and promotion.

Table 9.7. Marketing arrangement by cattle PGs, Southern Tagalog, 1993.

Source		Buying Arrangement	Selling Arrangement
PG1	Coop Members	Coop and members signed an agreement. It binds the coop and the members to dispose the animals within 6 months. Part of the "paiwi" project of the coop. Cattle were picked up by the coop from members. Coop paid to the members on a credit basis ranging from 1 to 2 weeks. Coop provides production inputs (feeds, medicines, etc.) as part of credit marketing arrangement.	Delivered through suki in the auction markets. Payment will be on a credit basis. Coop looks for buyers and canvasses prices in the market.
PG2	Coop Members	Coop and members signed an agreement. It binds the coop and the members to dispose the animals within 6 months. Part of the paiwi project of the coop. Cattle were picked up by the coop from members. Coop paid to the members on a credit basis in 4 weeks. Coop provides production inputs (feeds, medicines, etc.) as part of credit marketing arrangement.	Delivered through "suki" in the auction market. Payment will be on a cash basis. Coop looks for buyers and canvasses prices in the market.
PG3	Coop Members	Coop and members signed an agreement. It binds the coop and the members to dispose the animals within 10 to 11 months. Part of the paiwi project of the coop. Cattle were picked up by the coop from members. Coop paid to the members on a credit basis in 4 weeks. Coop provides production inputs (feeds, medicines, etc.) as part of credit marketing arrangement.	Contact buyers picked up the cattle in the coop. Payment was done on cash basis. Coop looks for buyers and canvasses prices in the market.
PG4	Coop Members	Coop and members signed an agreement. It binds the coop and the members to dispose the animals within 10 to 11 months. Part of the paiwi project of the coop.	Contact buyers picked-up the assembled cattle in the coop. Payment was done on cash basis.

Table 9.7. (Continued).

Source		Buying Arrangement	Selling Arrangement
		Cattle were picked up by the coop from members. Coop paid to the members on a credit basis ranging from 1 to 2 weeks. Coop provides production inputs (feeds, medicines, etc.) as part of credit marketing arrangement.	Coop looks for buyers and canvasses prices in the market.
PG5	Coop Members	Coop and members signed an agreement. It binds the coop and the members to dispose the animals within 5 months. Part of the paiwi project of the coop. Cattle were picked up by the coop from members. Coop paid to the members on a credit basis ranging from 1 to 2 weeks. Coop provides production inputs (feeds, medicines, etc.) as part of credit marketing arrangement.	Contact buyers picked up the assembled cattle in the coop. Payment will be made on a credit basis ranging from 3 to 4 weeks. Coop looks for buyers and canvasses prices in the market.

The type of operation practiced was conditioned by the amount of capital required. PGs were not fully vertically integrated, hence, other trader services were still needed to prepare the product for the consumers.

Table 9.8 provides some indications on the success of the PG in the marketing operations. Buying and selling prices differed across PGs depending on the type of service performed and location. On the average, PGs incurred marketing costs on cattle ranging from P0.28 (PG5) to P0.80 (PG2) per kilo representing labor, transport, and some administrative charges. The net price margin was P17.07 per kg with a net return of P16.51. It should be noted that PG1 realized a very small margin as a consequence of the very low selling price of P91.00 per kg. The higher net return for the other PGs could be attributed to the low marketing cost incurred consideringthe limited nature of their activity. Also, the buying price of the PG was lower than that of the traders. But, upon distribution of the price difference to capital buildup and farmer-member share of 50 percent, benefits were positive and extremely large for PG5.

Marketing Channels

In cattle marketing, the product passes through a network of marketing channels where agents performing specialized marketing functions are linked together. The direction of flow for cattle marketed by the PG is shown in Figs. 9.1 to 9.5. From the farmers, a major portion of the produce was marketed to the cooperative, wholesale-retailers, and barrio buyers. Some were even selling directly to butcher-retailers. Farmer-members were not selling exclusively to the cooperative. Even though some commitment was established with the cooperative, farmers still opted to sell to other buyers because of higher prices and the need for immediate cash.

An almost similar channel structure was observed for nonmembers in Figs. 9.6 to 9.10. PGs were also buying from nonmembers, particularly in areas where traders were not commonly available. In some instances, prices offered by PGs were relatively higher than those given by traders.

In the product flow, losses through shrinkages and butchering were incurred by traders, particularly butcher-retailers. This was primarily an addition to cost and a reduction on the potential amount available to consumers.

Cost-and-Return Analysis

Table 9.9 provides a summary of costs and returns of farmer-members and nonmembers. It also gives some indications on the

Table 9.8. Marketing operations of cattle PGs, Southern Tagalog.

Items	PG1	PG2	PG3	PG4	PG5	All PGs
Volume Procured and Sold (kg)						
Members	2,400.00	4,830.00	9,000.00	16,800.00	93,940.00	25,394.00
Nonmembers	1,600.00	0.00	0.00	0.00	5,120.00	1,344.00
Total	4,000.00	4,830.00	9,000.00	16,800.00	99,060.00	26,738.00
Average Buying Price (P/kg)	88.00	88.67	89.00	88.00	40.00	78.73
Total Value of Product Procured	352,000.00	428,276.10	801,000.00	1,478,400.00	3,962,400.00	2,105,082.74
Average Selling Price (P/kg)	91.00	110.00	110.00	108.00	60.00	95.80
Total Value of Products	364,000.00	531,300.00	990,000.00	1,814,400.00	5,943,600.00	2,561,500.40
Marketing Margin	3.00	21.33	21.00	20.00	20.00	17.07
Marketing Cost (P/kg)	0.40	0.80	0.57	0.67	0.28	0.54
Net Returns (P/kg)	2.60	20.53	20.43	19.33	19.72	16.53
Distribution of Net Returns						
25% to coop mgt.	0.65	5.13	5.11	4.83	4.93	4.13
25% for capital	0.65	5.13	5.11	4.83	4.93	4.13
50% for farmer-members	1.30	10.27	10.22	9.66	9.86	8.26
PG Capital Buildup	2,624.00	24,826.20	45,963.00	91,186.00	488,365.80	128,593.00
Members' Patronage Refund	3,148.80	49,652.40	91,926.00	162,372.00	926,248.40	246,669.52
Total Benefits from Sales Through PG	5,772.80	74,478.60	137,889.00	253,558.00	1,414,614.20	375,262.52
Traders' Buying Price	90.00	87.67	90.00	90.00	50.00	91.53
Price Differential	(2.00)	1.00	(1.00)	(2.00)	(10.00)	(12.80)
Members' Loss to Price Differential	(4,800.00)	4,830.00	(9,000.00)	(33,800.00)	(939,400.00)	(196,394.00)
Members' Net Benefits	972.80	79,308.60	128,889.00	219,758.00	475,214.20	178,868.52

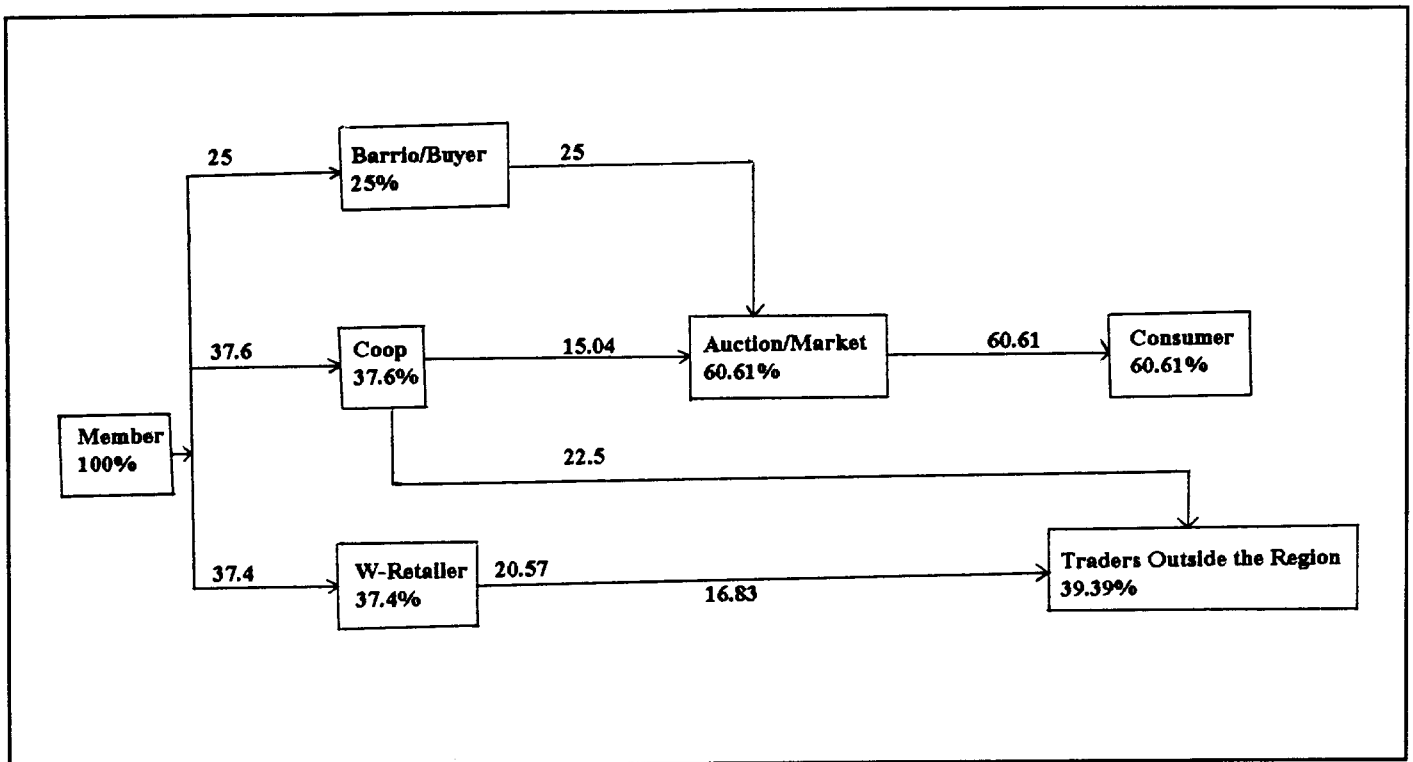

Fig. 9.1. Product flow of cattle marketing by farmer-members in Soro-Soro, Ibaba, Batangas City, 1993.

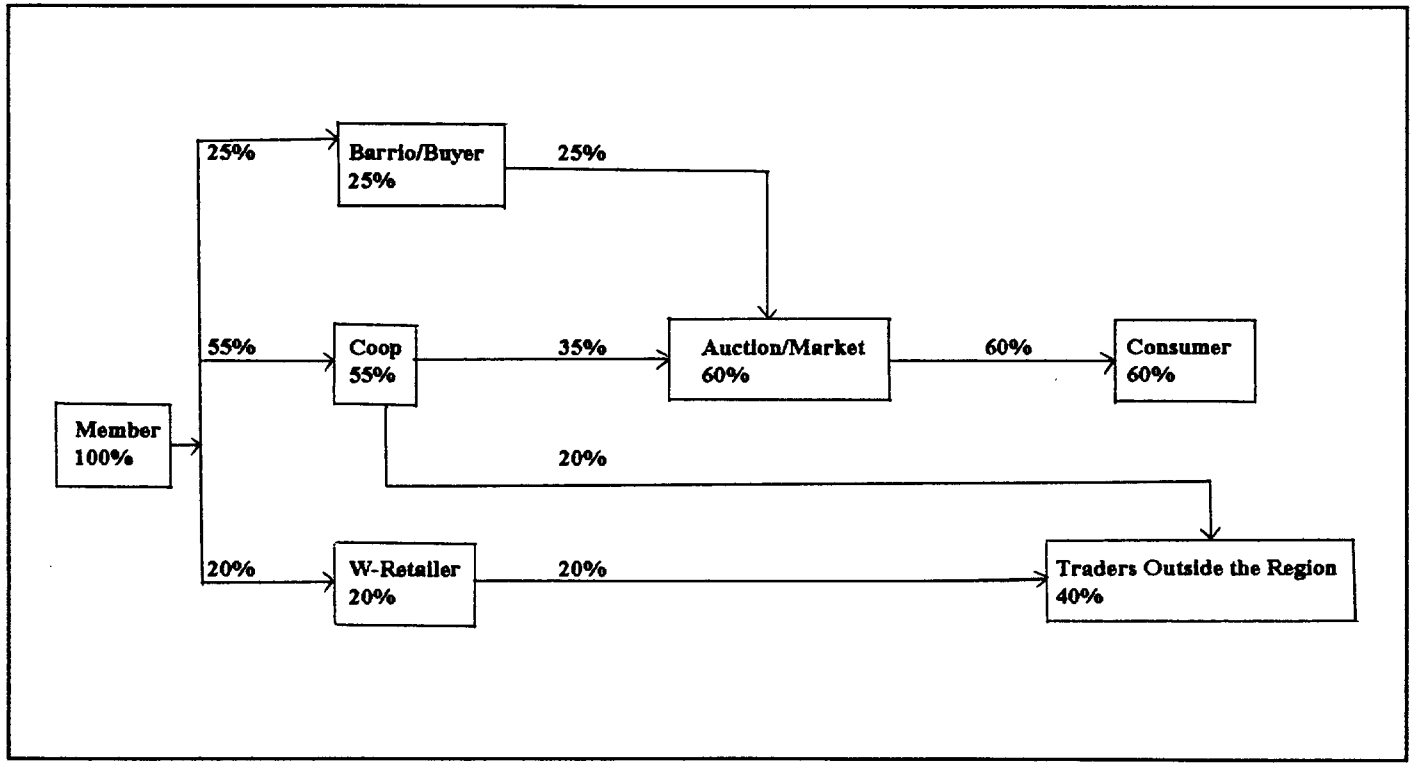

Fig. 9.2. Product flow of cattle marketing by farmer-members in Banga, Talisay, Batangas, 1993.

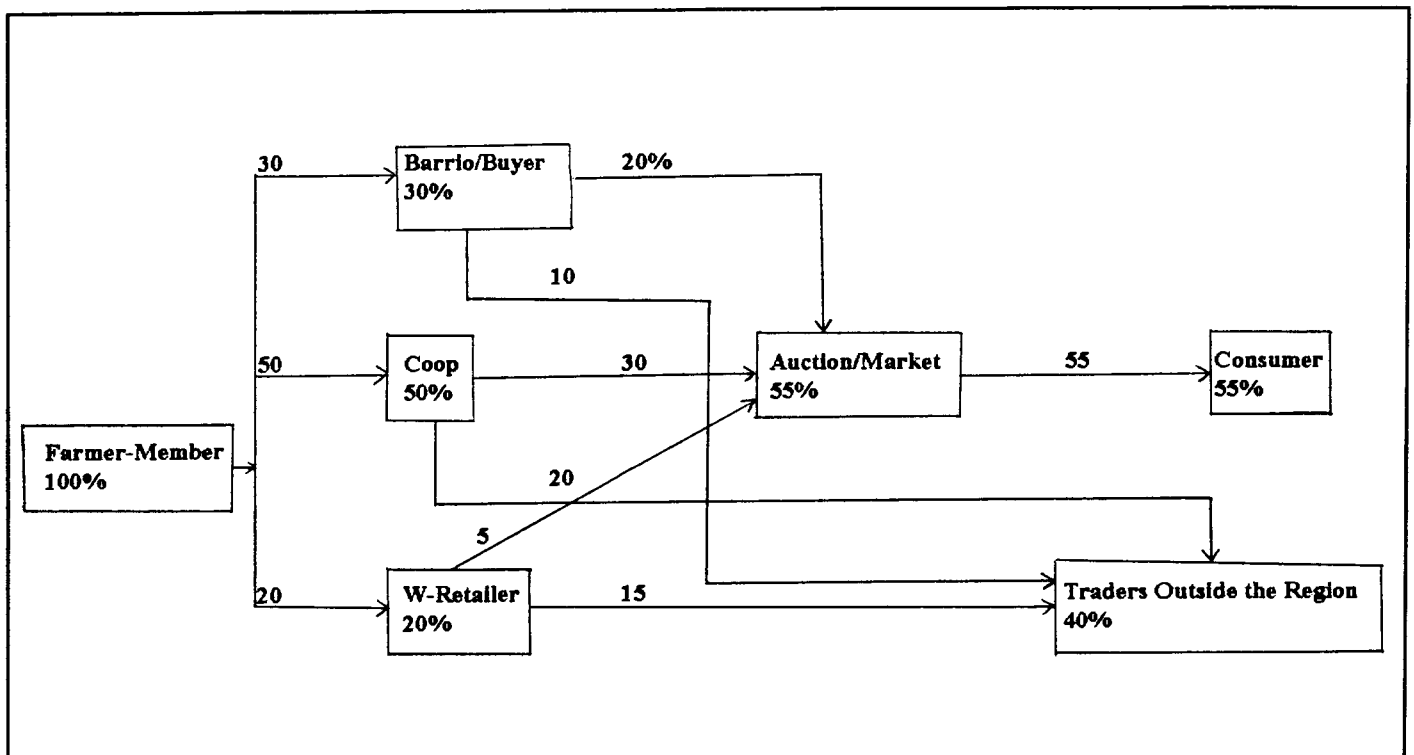

Fig. 9.3. Product flow of cattle marketing by farmer-member in Luyos, Tanauan, Batangas, 1993.

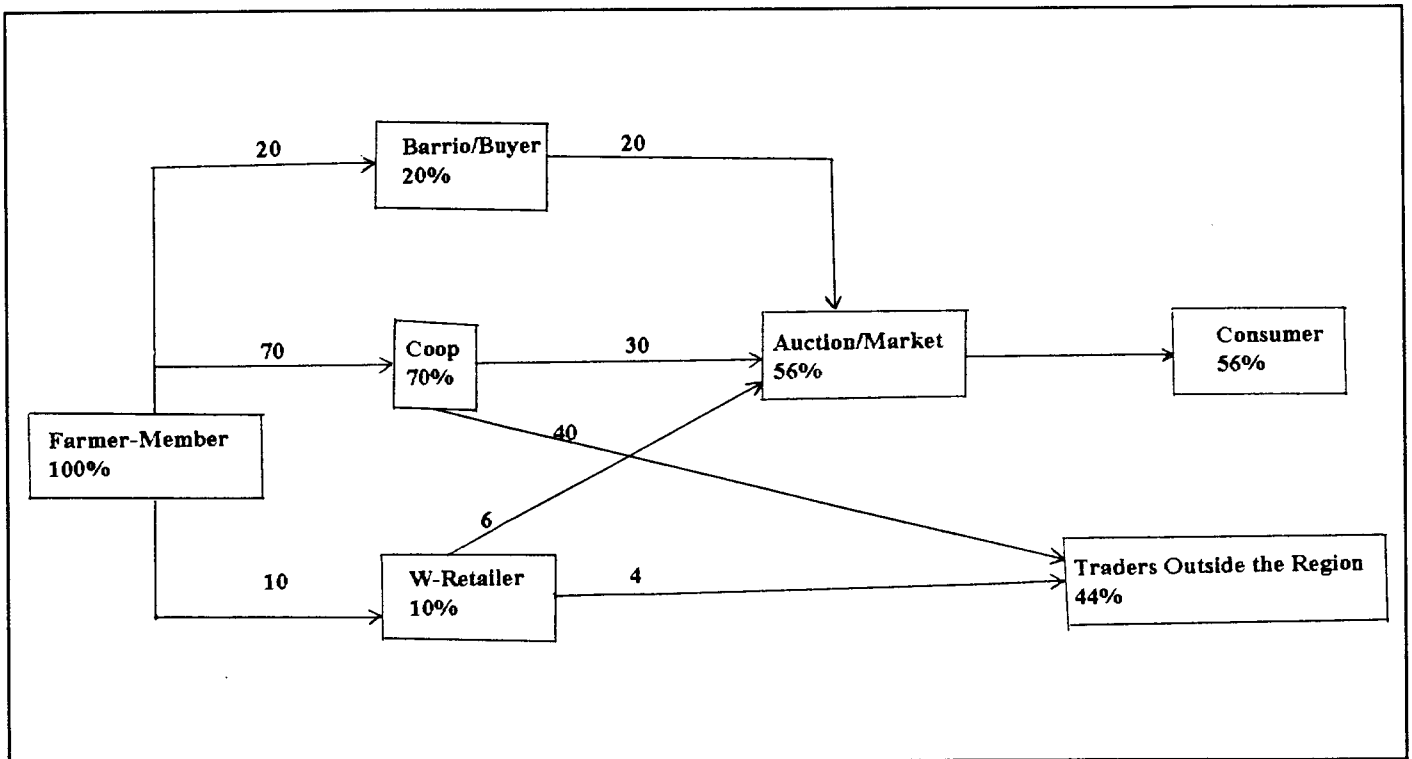

Fig. 9.4. Product flow of cattle marketing by farmer-members in Sta. Lucia, Dolores, Quezon, 1993.

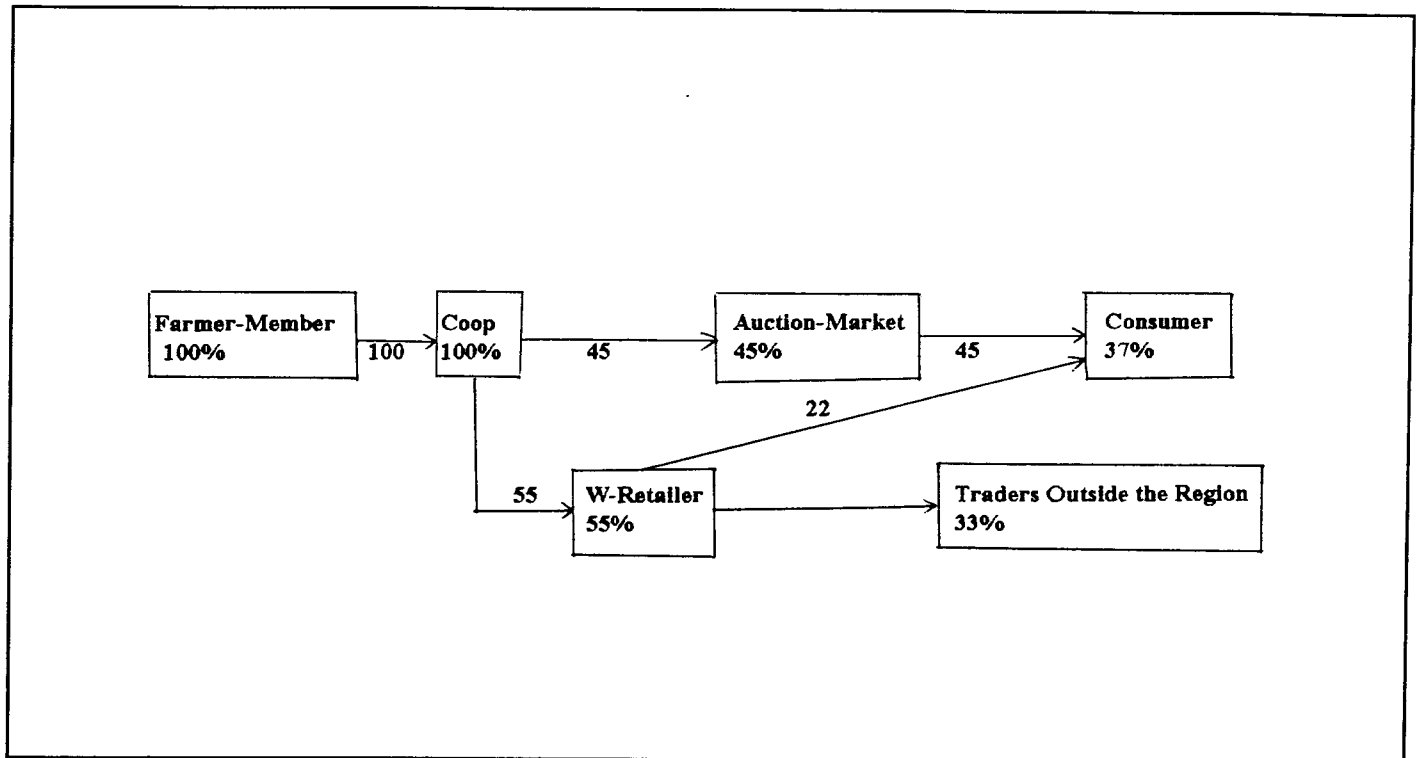

Fig. 9.5. Product flow of cattle marketing by farmer-member in Behia, Tiaong, Quezon, 1993.

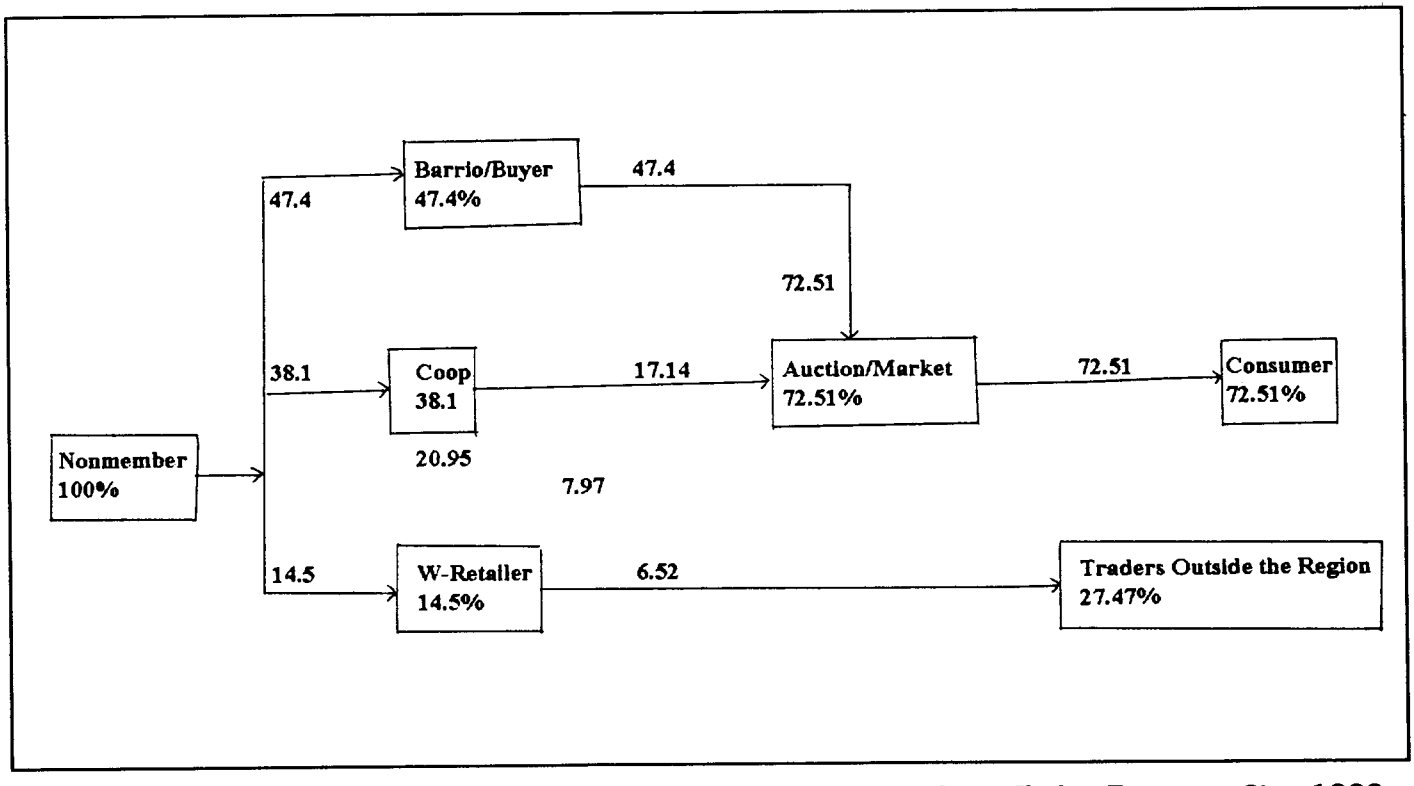

Fig. 9.6. Product flow of cattle marketing by nonmembers in Soro-Soro, Ibaba, Batangas City, 1993.

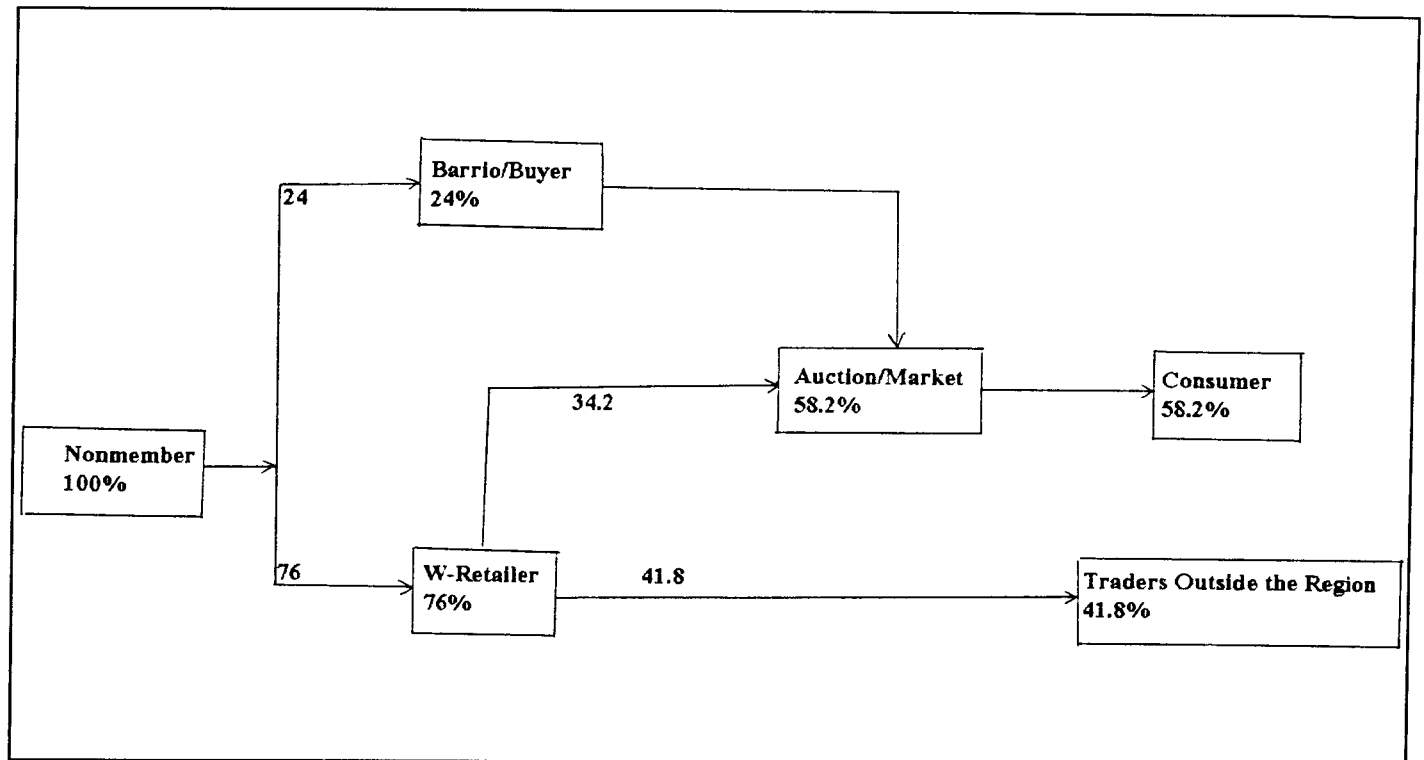

Fig. 9.7. Product flow of cattle marketing by nonmember in Banga, Talisay, Batangas, 1993.

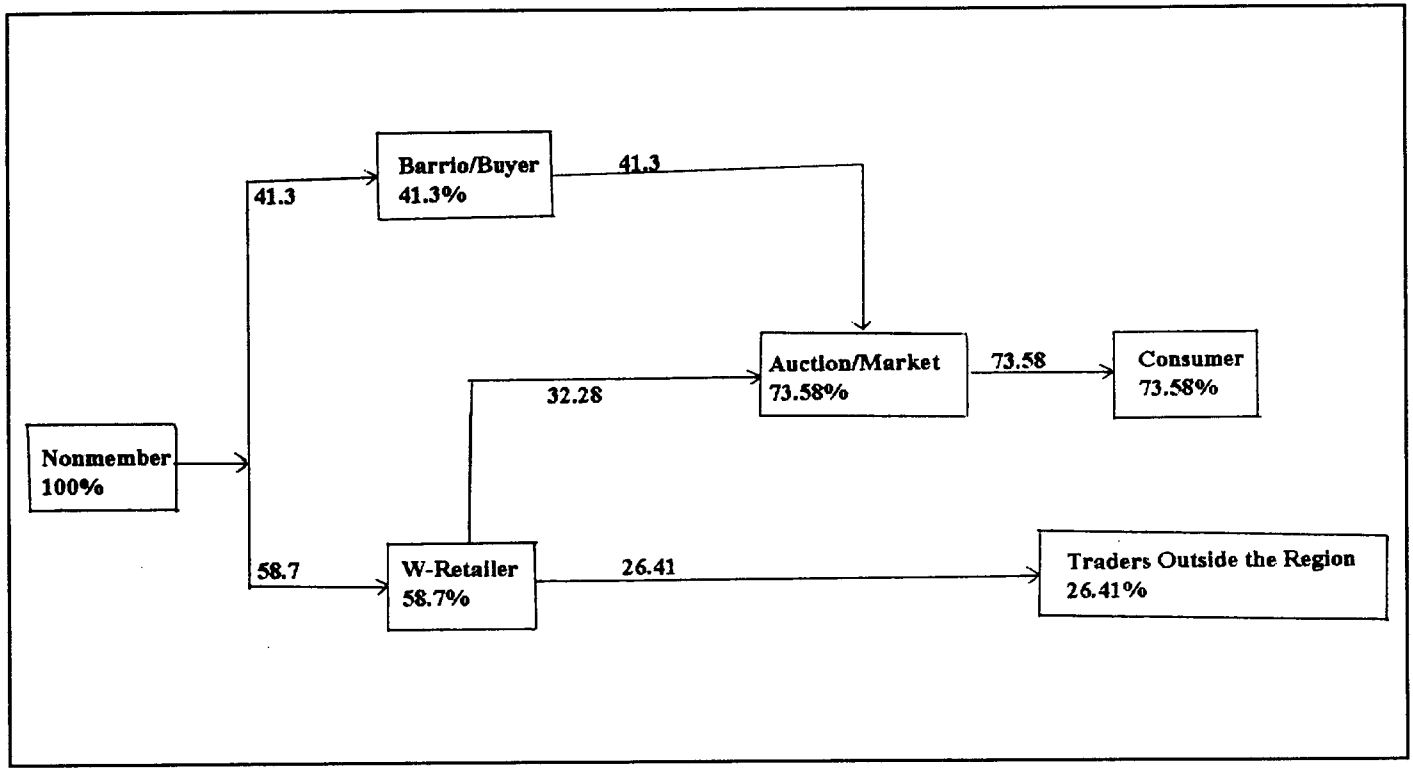

Fig. 9.8. Product flow of cattle marketing by nonmembers in Luyos, Tanauan, Batangas, 1993.

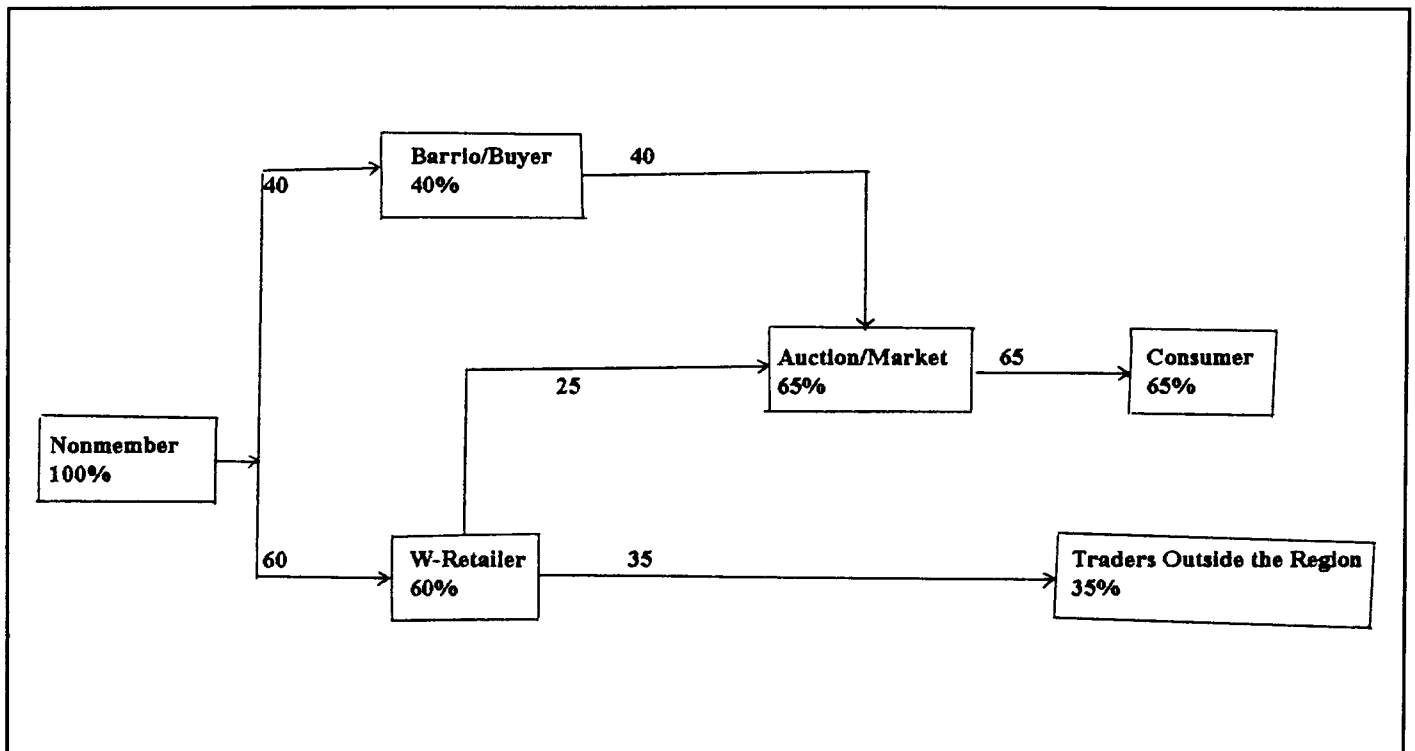

Fig. 9.9. Product flow of cattle marketing by nonmembers in Sta. Lucia, Dolores, Quezon, 1993.

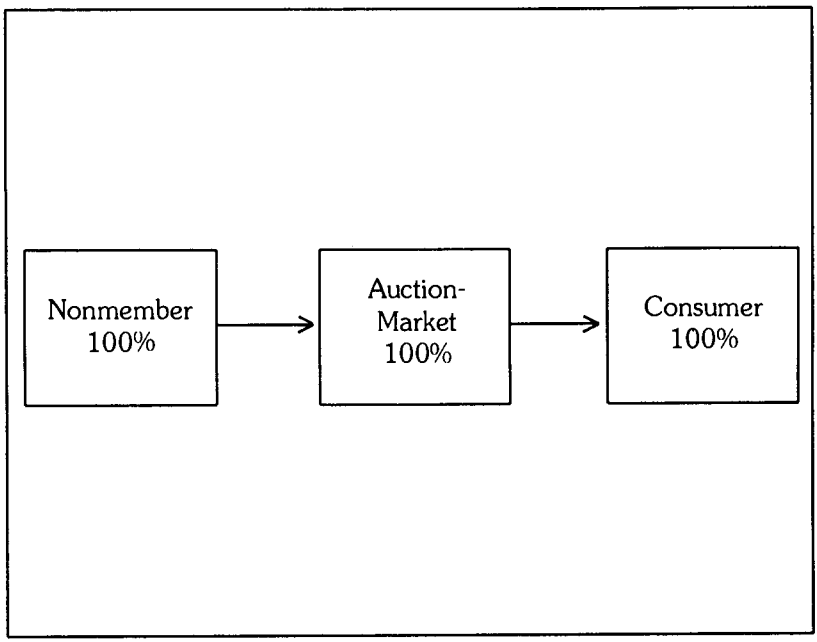

Fig. 9.10. Product flow of cattle marketing by nonmembers, Behia, Tiaong, Quezon, 1993.

economics of livestock production between PG members and nonmembers. Results reveal that farmer-members were better-off than nonmembers. On a per head basis, members were practically earning more. This could be attributed to the higher returns afforded by members through better prices. Also, as a member of the cooperative, they have ready access to inputs such as medicines, technical assistance, and good animal stocks. What is significant, however, is the cooperative service of looking for outlets that offer better prices.

Linkages with Other Institutions

To support the marketing, technical and training activities, the PG has established linkages with various government and private institutions (Table 9.10). All of the PGs had linkages with government institutions such as the DA through the LEAD program, the Bureau of Animal Industry (BAI) and the LBP under its livestock dispersal project and the Philippine National Bank (PNB) for its technical, technology transfer, and financial assistance, respectively. Other institutions who also gave assistance were DOST, DTI, and Dairy Training Research Institute (DTRI). Meanwhile, private institutions extended training on cattle production management and technical assistance on vaccination of the

Table 9.9. Comparative cost-and-return analysis of PG members and nonmembers, last production cycle, Southern Tagalog, 1992-1993.

Item	Total Returns	Total Cost			Net Farm Income	BCR
		Cash	Noncash	Total		
			Per Head of Cattle Sold			
PG 1						
Member	23,638	2,827	3,560	6,387	17,251	3.70
Nonmember	19,286	2,150	4,028	6,178	13,108	3.12
PG 2						
Member	19,374	15,179	253	15,432	3,942	1.26
Nonmember	16,667	14,783	354	15,137	1,530	1.10
PG 3						
Member	17,539	15,105	275	15,380	2,159	1.14
Nonmember	16,200	15,020	305	15,325	875	1.06
PG 4						
Member	16,060	14,997	202	15,199	861	1.06
Nonmember	15,500	15,039	262	15,301	199	1.01
PG 5						
Member	20,118	11,249	7,486	18,735	1,383	1.07
Nonmember	19,227	9,598	6,762	16,360	2,867	1.18
All PGs						
Member	19,346	11,871	2,355	14,226	5,120	1.36
Nonmember	17,376	11,318	2,342	13,660	3,716	1.27

Table 9.10. Nature of linkage of cattle PGs with GOs and NGOs in Southern Tagalog, 1993.

	Agency a/	Nature of Linkages
	GO	
	LBP	Technical /Financial assistance & trainings
PG1	Private	
	Vitarich/Purina	Technical/Trainings
	Cooperative Union of Batangas, Inc.	Policy advocacy, training
	Cooperative Union of Southern Tagalog, Inc.	Policy advocacy, training
	Cooperative Union of the Phil., Inc.	Policy advocacy, training
	GO	
	PDC	Technical /Financial assistance & trainings
	DTRI	Technical Assistance
PG2	PRIVATE	
	LIMCOMA	Input assistance
	GO	
	LBP	Cattle fattening dispersal, financial trainings
	PCA	Technical/Training assistance
PG3	DA	Technical assistance
	PRIVATE	
	LIMCOMA	
	GO	Input assistance
	LBP	Cattle fattening dispersal, financial trainings
	PCA	Technical/Training assistance

Table 9.10. (Continued).

	Agency a/	Nature of Linkages
PG4	DA	Technical/Training assistance
	DTI	Technical /Financial assistance & trainings
	PRIVATE	
	MEGA FEEDS	Input assistance
	GO	
	LBP	Cattle fattening dispersal, financial trainings
	DA	Technical/Training assistance
PG5	PRIVATE	
	SUSI FOUNDATION	Free use of facilities
		Market linkage
		Technical/Training assistance

a/ LBP-Land Bank of the Philippines
PDC- Philippine Dairy Corporation
DTRI-Dairy Training and Research Institute
LIMCOMA- Lipa Marketing Cooperative
PCA- Philippine Coconut Authority
DTI- Department of Trade and Industry
DA- Department of Agriculture

animals. Cooperative federations also played an important role in cooperative establishment. Among their services were training of officers and members on policy advocacy and administration.

Incentives to PGs

Government incentives have been designed to motivate and sustain the establishment and operations of PGs. Among the incentives obtained by PGs were the following: capital acquisition, low-interest credit, tax exemption, and market linkages. Three out of four PGs ranked capital acquisition (loan), low-interest loan, and tax exemption as the major incentives of the cooperative. Market linkages were the least incentive availed by the PGs, except by PG1. This could be explained by the fact that each PG was looking for its own cattle outlets. The very limited marketing assistance extended by the government to these PGs proved to be crucial, particularly in periods when prices were low (Table 9.11).

Marketing Problems and Coping Mechanism

The major problems reported by PGs were mainly on the lack of markets and low prices offered by traders in the area because of oversupply. All PGs in the area encountered the same major problem of disposing their produce. It was observed that this problem was common and the PGs' coping mechanism was to sell or transport their animals outside the area in search for alternative markets (Table 9.12).

The PG and Trader

This section compares the marketing practices of PGs and traders, including prices, cost, and margins to logical conclusions on the advantages of the PGs over the traders. Can farmers really compete with traders? What economic advantages can the PG provide in the marketing system? These are the questions that need to be addressed to justify the existence of the marketing services of the PG vis-a-vis the traders.

Marketing Efficiency

The analysis based on comparative costs, margins, and returns does not provide a clear indication that PGs are relatively efficient in performing the marketing services. The comparison of marketing costs

Table 9.11. Incentives availed by cattle PGs in Southern Tagalog, 1993. a/

Incentives	PG1	PG2	PG3	PG4	PG5	All PGs
Capital Acquisition	*	*	*	*	*	4
Low Interest	*	*	*	*	*	4
Tax Exemption	*	*	*	*	*	4
Market Linkages	*	x	x	x	*	2

a/ *=Availed.
x=Not availed.

Table 9.12. Marketing problems encountered and coping mechanisms of cattle by PGs in Southern Tagalog, 1993.

		Marketing Problems	Coping Mechanisms
PG1	Buying	None	
	Selling	Low price due to oversupply	None
		Poor farm-to-market roads	Transport/Sell the animals outside the area
		No processing facilities	like Padre Garcia, Lipa, Tanauan, Metro Manila
		Lack of capital for marketing activities	
PG2	Buying	None	
	Selling	Low price due to oversupply	None
		Poor farm-to-market roads	Transport/Sell the animals outside the area
		No processing facilities	like Padre Garcia, Lipa, Tanauan, Metro Manila
		Lack of capital for marketing activities	
PG3	Buying	None	
	Selling	Low price due to oversupply	None
		Poor farm-to-market roads	Transport/Sell the animals outside the area
		No processing facilities	like Padre Garcia, Lipa, Tanauan, Metro Manila
		Lack of capital for marketing activities	
PG4	Buying	None	
	Selling	Low price due to oversupply	None
		Poor farm-to-market roads	Transport/Sell the animals outside the area
		No processing facilities	like Padre Garcia, Lipa, Tanauan, Metro Manila
		Lack of capital for marketing activities	
PG5	Buying	None	
	Selling	Low price due to oversupply	None
		Poor farm-to-market roads	Transport/Sell the animals outside the area
		No processing facilities	
		Lack of capital for marketing activities	

incurred by PGs with that of traders was not consistent to definitely prove that PGs were more efficient. But the gross margins of traders were relatively high, but the difference was not quite significant.

Table 9.13 shows the gross and profit margins of PGs and traders. While gross margins were low for PGs, net incomes were relatively higher than those of traders. Again, the low total cost incurred by the PG practically contributed to higher profits, except for PG4. The high net return could be attributed to the low marketing cost incurred by the PG considering the limited nature of its activities. The inconclusive nature of the result stems from the differences in the package of marketing services offered by the PGrelative to the trader in the locality based on the first sale. Although specific services common to both, e.g., transportation can be compared, it was not sufficient to establish the advantage of the PG because of variations in volume handled, capital, and area served. Perhaps, what can be compared are the different channels in cattle distribution, one of which is participated in by the PG. The channel or chain with the least cost will be most efficient.

The buying price of the PG was lower than that of the traders. On the arrangement, 50 percent of the profit margin will be retained by the cooperative. This further reduces the amount realized by the farmer-members. On the other hand, it increases the earnings of the PG through arbitrage. This retention, however, is returned to the members in the form of patronage refund at a much later period.

Benefits to Farmer-Members

Total benefits of farmer-members ranged from P54,789 to P7.4 million or P498 to P7,533 per member (Table 9.14). These benefits included other cooperative activities ranging from consumer store, feedstore, credit or relending, and feed milling and interest on share capital. All PGs were involved in input and output retailing activities. Without these other activities, PG benefits will be minimal. In fact, PGs incurred some losses from price and interest rate differentials ranging from P4,800 to P939,000 and P36,000 to P84 million. For all PGs, trader prices were reportedly high. PGs availing loans from financial institutions resorted to alternative sources by charging higher interest rates. However, if the patronage refund and interest on share capital were included, these would compensate positively to the loss incurred by PGs.

Nonquantified Benefits

Table 9.16 provides the nonquantified benefits derived by farmer-members in joining the cooperative. Among them are the meetings and

Table 9.13. Comparative marketing operations of PGs and traders on cattle, Southern Tagalog, 1992-1993.

Item	PG1 vs. Trader (n=5)		PG2 vs. Trader 2 (n=3)		PG3 vs. Trader 3 (n=5)		PG4 vs. Trader 4 (n=3)		PG5 vs. Trader 5 (n=0) a/		Avg. All PGs	Avg. All Traders
Volume Handled (kg) b/	4,000	9,760	4,830	6,200	9,000	8,525	16,800	7,200	93,940	n.a.	25,714	7,921
Buying Price	88.000	89.000	88.670	87.670	89.000	90.000	88.000	90.000	40.000	n.a.	78.830	89.170
Selling Price	91.000	91.000	110.000	110.000	110.000	110.000	108.000	110.000	60.000	n.a.	95.800	105.250
Marketing Margin (MM)	3.000	2.000	21.330	22.330	21.000	20.000	20.000	20.000	20.000	n.a.	17.070	16.080
Marketing Cost (MC)	0.420	0.640	0.750	0.580	0.580	0.560	0.670	0.540	0.360	n.a.	0.560	0.560
Mayors' Permit	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.015	0.000	n.a.	0.000	0.000
Market Fee	0.000	0.000	0.008	0.012	0.006	0.117	0.015	0.018	0.000	n.a.	0.010	0.040
Transfer/Document	0.043	0.010	0.095	0.048	0.073	0.070	0.071	0.089	0.000	n.a.	0.060	0.050
Subsistence	0.000	0.040	0.217	0.200	0.166	0.046	0.142	0.088	0.270	n.a.	0.160	0.090
Transportion	0.375	0.172	0.434	0.242	0.333	0.175	0.428	0.333	0.090	n.a.	0.330	0.230
Weighing Fee	0.000	0.322	0.000	0.000	0.000	0.023	0.000	0.000	0.000	n.a.	0.000	0.090
Toll Fee	0.000	0.000	0.000	0.060	0.000	0.011	0.000	0.000	0.000	n.a.	0.000	0.020
Agent Fee	0.000	0.000	0.000	0.020	0.000	0.117	0.000	0.000	0.000	n.a.	0.000	0.030
Net Income (NI)	2.58	1.46	20.58	21.75	20.42	19.44	19.33	19.46	19.64	n.a.	16.51	15.63
MC as % of MM	14.00	32.00	3.52	2.60	2.76	2.80	3.35	2.70	1.80	n.a.	3.28	3.48
MM as % of NI	116.28	136.99	103.64	102.67	102.84	102.88	103.47	102.77	101.83	n.a.	103.39	102.88

a/ n.a.- not applicable.
b/ 1 kg of carcass= 2 kg/liveweight.

Table 9.14. Benefits to farmer-members, Southern Tagalog, 1992-1993.

Item	PG1		PG2		PG3		PG4		PG5		Avg. All PGs	
	Total	Member	Total	Member	Total	Member	Total	Member	Total	Member	Total	Member
Cattle Trading												
Capital Buildup	2,624	3	24,846	672	45,558	414	81,178	1,691	488,365	1,503	128,514	856
Interest on Share Capital	6,859,598	6,955	2,334	63	3,000	27	4,800	100	663,304	2,041	1,306,607	1,637
Input Discount/Rebates	990	1	2,470	67	6,115	74	465	9	306	1	0	30
Patronage Refund	3,144	3	49,691	1,343	91,116	828	162,372	3,383	927,187	2,853	246,702	1,682
Gain (Loss) due to Price Differential	(4,800)	(5)	(4,930)	(131)	(9,000)	(82)	(33,600)	(700)	(939,400)	(2,890)	(198,326)	(762)
Gain (Loss) due to Interest Differential	30,000	30	0	0	84,000	764	60,000	1,250	36,000	111	42,000	431
Net Benefits	5,831,554	5,928	75,510	1,960	54,789	498	155,205	3,233	177,503	546	1,268,312	2,433
Other Income	1,581,647a/	1,607	130,168b/	3,518	0	0c/	0c/	0c/	9,696c/	30	344,302	1,031
Total Benefit	7,413,201	7,634	202,678	5,478	54,789	498	165,205	3,233	187,198	576	160,614	6,464

a/ Includes earnings from feed mill and consumers' store.
b/ Includes earnings from the credit, feed, and consumer stores.
c/ Includes earnings from feed and consumer stores.

Table 9.15. Percent of PG activities attended, reason for selling their cattle to PG, and number of farmers who expressed satisfaction in PG services, Southern Tagalog, 1992-1993.

Item	PG1		PG2		PG3		PG4		PG5		Avg. PG	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Activities												
Meetings												
12 x/year (monthly)	2	10	16	80	20	100	0	0	3	15	8	41
11 x/year	0	0	0	0	0	0	0	0	0	0	0	0
10 x/year (general)	18	90	4	20	0	0	20	100	17	85	12	59
Trainings/Seminars												
3 x/year	5	25	1	5	0	0	3	15	2	10	2	11
2 x/year	6	30	17	85	0	0	9	45	10	60	8	42
1 x/year and below	9	45	2	10	20	100	8	40	2	10	8	41
Reasons for Selling to PG												
PG is a regular buyer	17	85	0	0	0	0	0	0	0	0	3	17
Responsibility as member	3	15	10	50	2	0	3	15	0	0	3	11
To avail of patronage refund	17	85	10	50	18	100	17	85	14	70	12	76
Members satisfied in PG Services												
Input assistance	20	100	18	80	20	100	20	100	14	70	18	92
Financing	20	100	20	100	20	100	20	100	14	70	19	94
Procurement/Buying	20	100	10	50	20	100	5	25	14	70	14	69
Provision of price information	20	100	20	100	20	100	20	100	14	70	19	94

a/ Multiple response.

trainings, particularly the technical assistance extended such as vaccination, livestock raising/production, and milk processing sponsored by different government agencies. Meetings generally sponsored by cooperative management included premembership seminars and general assembly. These activities are essential to the success of the cooperative. Through continuous education and social reorientation cooperative members became more aware of their social and economic responsibilities. These would also enhance their capability to participate in the organization and satisfy the needs of their constituents through collective action.

Summary and Conclusion

In general, this study was undertaken to examine the possible advantages PGs have in marketing cattle in the Southern Tagalog Region. It specifically addresses issues on whether the formation of PGs can induce marketing efficiency as well as improve the economic well-being of members. Also, the study looked at the linkaging activities of the cooperative and its problems and constraints relative to trade.

Results indicate that members of cattle PGs were economically better-off than nonmembers mainly because of the benefits derived by farmer-members through patronage refund and interest on share capital. Other benefits include participation to seminars, policy advocacy, and technical trainings. The presence of the PG in the marketing chain proves to be advantageous in terms of providing a good market for cattle and the access to other services, but it was not clear whether they performed better than competing traders in the area.

Cooperatives served as conduits and recipients of some government support/benefits such as seminars, accessibility to inputs, credit or financial assistance, and access to market. These services have proven to be advantageous in the operation of the PG.

Policy Recommendations

Results of the study indicate the need for interrelated policy reforms and programs directed towards the greater participation of the marketing cooperative in the cattle marketing system.

First, cooperatives provide functions other than marketing services such as trainings and operational advice not only in production, but also in marketing. In areas where it is particularly weak, linkages with private and most especially government institutions should be strengthened to support cooperative activities.

Second, the cooperative becomes a ready market of cattle for the farmers with better prices. This surely increases the share of farmers to the total marketing bill and the marketing efficiency of the PGs. But, most lack capital for marketing operations, hence, there must be a sustained effort on the part of the government to provide capital at reasonable interest rates to enable cooperatives to get a bigger share of the cattle market.

Third, marketing costs incurred by the PG and the traders were high owing to high transport and processing costs. Public sector spending in areas where PGs operate must be increased to further realize the benefits of improved marketing. The infrastructures include roads and postharvest marketing facilities. For the cooperative to be competitive, it should have access to low-cost transport and processing facilities.

Fourth, PGs were particularly constrained by low prevailing prices during sale due to lack of information and access to alternative markets. It is, therefore, necessary that these groups gain access to a good market information system to fully realize the benefits of a good marketing system.

Fifth, the government should improve and sustain the support services to cooperatives, particularly on marketing operations and in social development such as trainings and seminars to further enhance their organizational and operational capabilities.

By no means is this list exhaustive, but it includes the critical reforms and programs that were borne by this study to improve the marketing capabilities of PGs.

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Chapter 10

Marketing of Swine by Small Producer Groups in Central Luzon, Southern Tagalog, and Bicol

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Introduction

The livestock industry contributes about 20 percent to the Gross Value Added (GVA) in agriculture (DA 1991). Of this value, it is believed that the swine industry accounts for the biggest share. From 1980 to 1990, the industry contributed about 85 percent of the combined total value of cattle and swine, with cattle industry accounting for only 15 percent.

Among the 13 regions in the country, Southern Tagalog contributes the largest share to the total national output. Central Luzon ranks second contributing an average of 12.79 percent to the total swine population from 1980 to 1990. Of this output in the region, about 52 percent is contributed by the backyard raisers and the remaining 48 percent comes from the commercial raisers.

In Bicol, hogs are the major livestock produced and contribute about 95 to 99 percent of the regional livestock production. Production is greatly concentrated in Camarines Sur and Masbate. The region contributes 7 to 9 percent of the total hog production in the country. Hog production, however, has been declining since 1987.

The industry is currently dominated by small and widely dispersed backyard raisers accounting for about 80 percent of the country's hog population. These small raisers are usually price takers. Because of limited resources and access to market, they seldom perform marketing activities, except sale. Traders control the product distribution which

makes raisers feel they are exploited. This is the underlying assumption in the formation of cooperatives.

To improve the bargaining power of small livestock raisers, to attain fairness in trading, and to enhance their financial access to credit, the government passed several laws and enacted policies supporting the formation of cooperatives throughout the country.

This chapter presents the empirical findings on the study of the marketing operations of swine producer groups (PGs) and traders.

Objectives of the Study

The study aims to analyze the performance of various PGs engaged in the marketing of swine.

Specifically, it aims to:

1. provide an overview of the production-marketing- consumption system of swine;
2. determine and analyze various marketing services performed over time by the PGs and the traders;
3. evaluate and compare the marketing efficiency of these organizations with alternative marketing channels/institutions;
4. identify and determine the effect of support services and other related infrastructures and policies on the PGs;
5. analyze various marketing constraints and problems and determine the coping mechanisms of PGs;
6. evaluate the impact of these PGs on the social and economic well-being of farmers;
7. recommend some policy agenda/actions to improve the overall performance and economic efficiency of these marketing groups; and
8. develop possible research-policy linkages to enhance research result utilization.

Sampling and Analysis

The study covered Regions III (Central Luzon), IV (Southern Tagalog), and V (Bicol), the leading hog producers in the country.

Similar sampling procedure was employed for the three regions. Five PGs were randomly selected from each region using the list provided by the LBP field offices, CDA, and DA. For each PG, member-respondents were randomly selected. Traders and nonmember-respondents within the service area of the cooperative were also

randomly selected to constitute the sample. The distribution of sample respondents is presented in Table 10.1.

The study utilized both primary and secondary data. Primary data were collected through personal interview with the aid of prepared questionnaires. Secondary data used in the study were taken from the government offices such as DA, BAS, local market officials, and other published reports.

Table 10.1. Breakdown of sample respondents by region.

	Central Luzon	Southern Tagalog	Bicol	Philippines
No. of PGs	5	5	5	15
No. of Members	152	100	120	372
No. of Non-members	52	50	61	163
No. of Traders	15	18	12	45

Respondents were described with respect to characteristics, marketing operation, support services availed of, problems faced and their coping mechanisms. PG operations were compared with those of the traders performing the same function.

Comparative analysis of the farm income of members and nonmembers was also done to determine the economics of farm operation. Benefits accruing to members both quantifiable and nonquantifiable were assessed.

Limitations of the Study

1. The CDA and DA lists of cooperatives do not indicate the status of the cooperative if it is still operational and its product line. These posted problem in the validation.
2. Some PGs do not keep records of the operation.
3. Traders are hesitant to give data on their business operation.
4. Some farmers sell their hogs on a per head basis hence, it is difficult to find the marketing cost involved per unit.
5. All PGs are multipurpose cooperatives operating several small businesses such as palay trading, farm input retailing, and consumer store, posting difficulty in the separation of cost, capitalization, and income from each of the business lines.

Empirical Findings

Profile and Marketing Services Performed by PGs and Traders

Profile of swine PGs

Basic information of the PGs in the three regions are presented in Table 10.2. All are multipurpose cooperatives providing major services to members such as financing and market linkaging. All PGs in Cagayan Valley handled several commodities. All started as rice cooperative and later expanded to include hog production. In Bicol, four PGs were single commodity cooperatives and one was multiproduct cooperative. The majority of the PGs were established and registered with CDA between 1981 and 1990 and started with a modest capitalization that ranged from P10,000 to P50,000 mostly coming from the members' share .

All PGs increased their capitalization over time. About 53 percent has a current capitalization that ranged from P500,000 to P50,000,000. This increase in capitalization came from the deferred payment of dividends and patronage refund, particularly for Cagayan Valley, donations, and retained earnings of the PGs from the operation. The majority of these PGs with big capitalization are from Southern Tagalog and Bicol reflecting large-scale operation.

Thirteen PGs started with a few members numbering from 10 to 50 and increased membership from 101 to 1,500 farmers who are engaged in both crop and hog production. Most of these PGs with big membership are from Southern Tagalog and have been operating for many years.

Annual income of the PGs varies. Four PGs had an annual income of P1,000 to P20,000, while six earned an annual income that ranged from P21,000 to P50,000. The high-income PGs were mainly from Southern Tagalog and Bicol. Three PGs from Southern Tagalog have been operating for more than 10 years and have generated an annual income of P500,000 to P10,000,000. One PG in Bicol realized a net loss from the operation attributed to the diversion of funds by the PG from one project to another and weak collection scheme. The bulk of the income of the PGs came from the sale of farm inputs.

Community profile of the PG areas

Central Luzon is located north of Metro Manila. It is a rice-producing region and people derive most of their income from raising crops and livestock. Swine is the major livestock produced in the area as reflected by the presence of big commercial swine raisers, particularly in Bulacan. Metro Manila serves as the major market outlet for the product in the region.

Table 10.2. Characteristics of PGs.

Characteristics	Central Luzon	Southern Tagalog	Bicol	Philippines
		Number Reporting		
Nature/Function				
Multipurpose	5	5	5	15
Year established				
Before 1960	-	-	-	-
1960-1970	-	2	-	2
1971-1980	-	1	-	1
1981-1990	4	2	2	8
1991-1993	1	-	3	4
Capitalization (P)				
Initial				
10,000-50,000	3	4	5	12
50,000-500,000	2	1	-	3
Current				
50,000-100,000	1	1	-	2
100,000-500,000	3	-	2	5
500,000-50,000,000	1	4	3	8
Membership				
Initial				
10-50	4	4	5	13
51-300	1	1	-	2
Present				
Below 50	-	-	1	1
50-100	4	1	2	7
101-1,500	1	4	2	7
Registration				
CDA	5	5	5	10
Net Annual Income (P)				
1,000-20,000	2	1	1	4
21,000-50,000	3	1	2	6
51,000-400,000	-	-	1	1
5,000,000-10,000,000	-	3	-	3

Southern Tagalog is south of Metro Manila. Agriculture is the main source of income and employment in the region. Most of the areas are planted to coconut and other fruit trees. Poultry and livestock industries are popular in the region on a small holder type of production system.

Bicol is located at the midsection of the country. Like the other two regions, agriculture is the main source of income and employment, contributing about 40.65 percent to Gross Regional Domestic Product in 1992. Swine is the major livestock produced in all the provinces of the region mainly as a backyard enterprise.

The study covered 14 municipalities from the three regions. A profile of the study area is presented in Table 10.3.

Table 10.3. Profile of sample municipalities.

Item	Central Luzon	Southern Tagalog	Bicol	Philippines
No. of Municipalities Covered	5	4	5	14
Average Number of PGs	53	5	10	23
Volume of Production (head)	10,067	273	7,132	5,824
Avg. No. of Traders				
Butcher/Retailers	35	4	17	19
Agent	4	-	1	2

Four PGs in Central Luzon are located in Bulacan (one each in the towns of Malolos, San Rafael, San Ildefonso, San Miguel) and one in Nueva Ecija (Talavera). For Southern Tagalog, two PGs are located in San Pablo City, two in Batangas (one in Tanauan and another in Batangas City), and one in Tayabas, Quezon. In Bicol, all PGs are located in Camarines Sur approximately 450 km from Manila (one each in Tigaon, Goa, Calabanga, Sipocot, and Libmanan). There are about 23 PGs operating in one municipality. The volume of swine production per municipality ranged from 243 to 10,067 head mostly coming from backyard raisers.

Among the three regions, Central Luzon reported the largest number of private traders operating in the study area. These traders are mainly butcher-retailers implying that most hogs produced are consumed within the area. Each municipality in the region has one operational slaughterhouse controlled and managed by the local government. The product flows in Figs. 10.1-10.4 show that some of the commodities are transported outside the sample municipalities and region. In contrast, products in Bicol are all consumed within the town (Fig. 10.5).

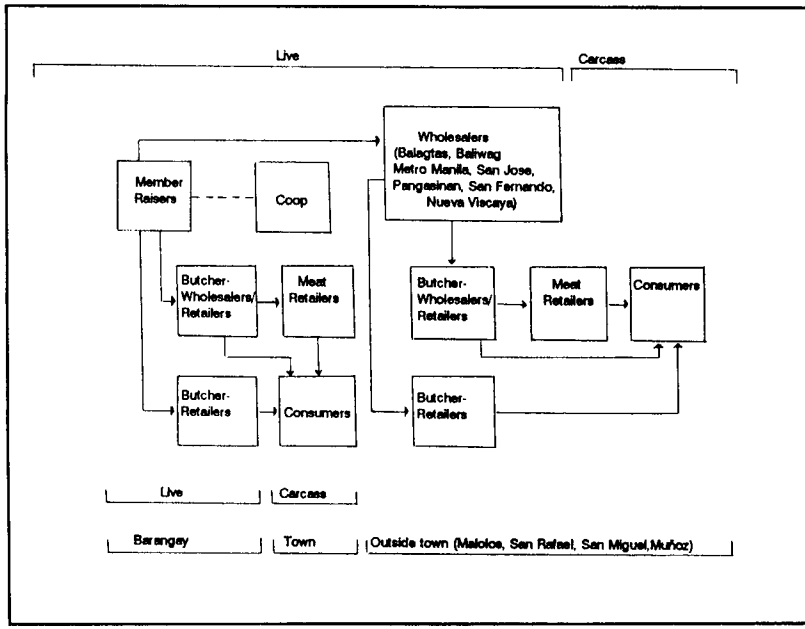

Fig. 10.1. Commodity flow at the town/city level (for PG1, PG2, PG4, PG5, Malolos, San Rafael, San Miguel, Bulacan and Muñoz, Nueva Ecija).

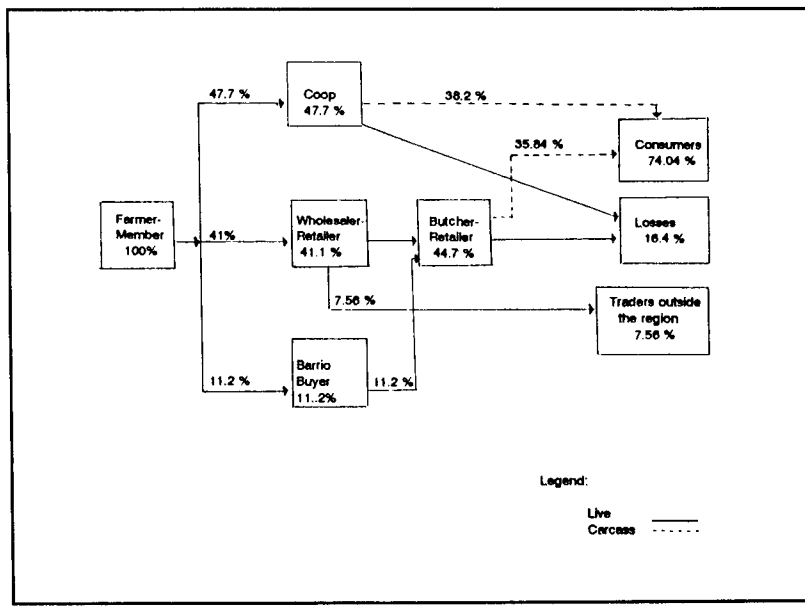

Fig. 10.2. Product flow of swine marketing of farmer-members in San Pablo City, Southern Tagalog, 1993.

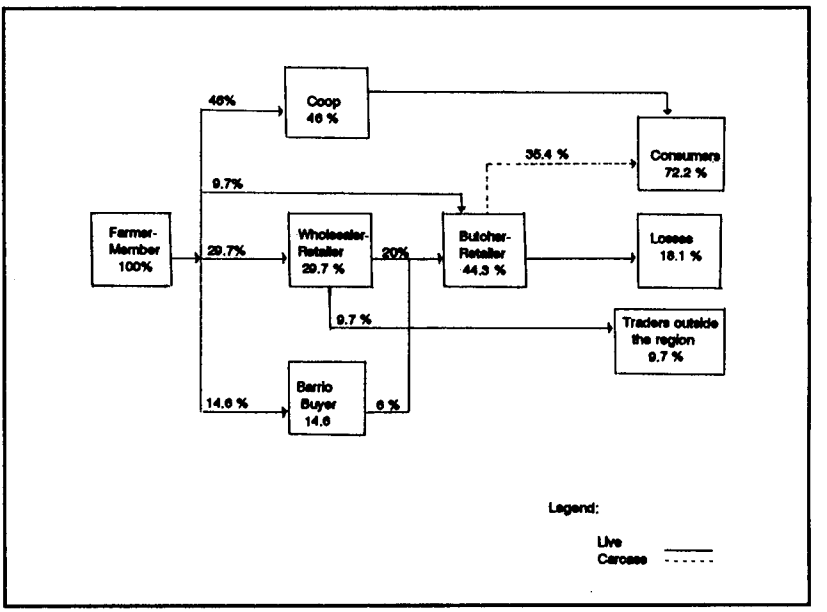

Fig. 10.3. Product flow of swine marketing of farmer-members in Soro-Soro Ibaba, Batangas, Southern Tagalog, 1993.

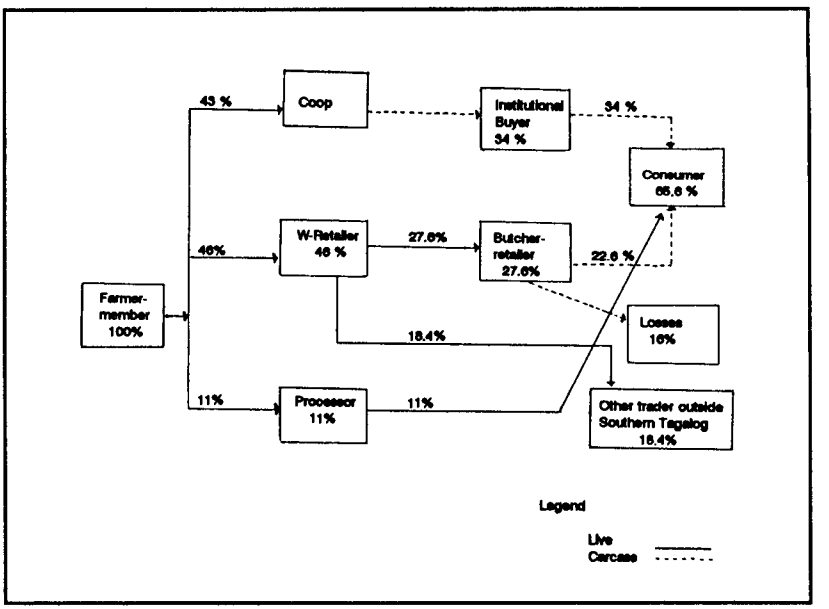

Fig. 10.4. Product flow of swine marketing of farmer-members in Tayabas, Quezon, Southern Tagalog, 1993.

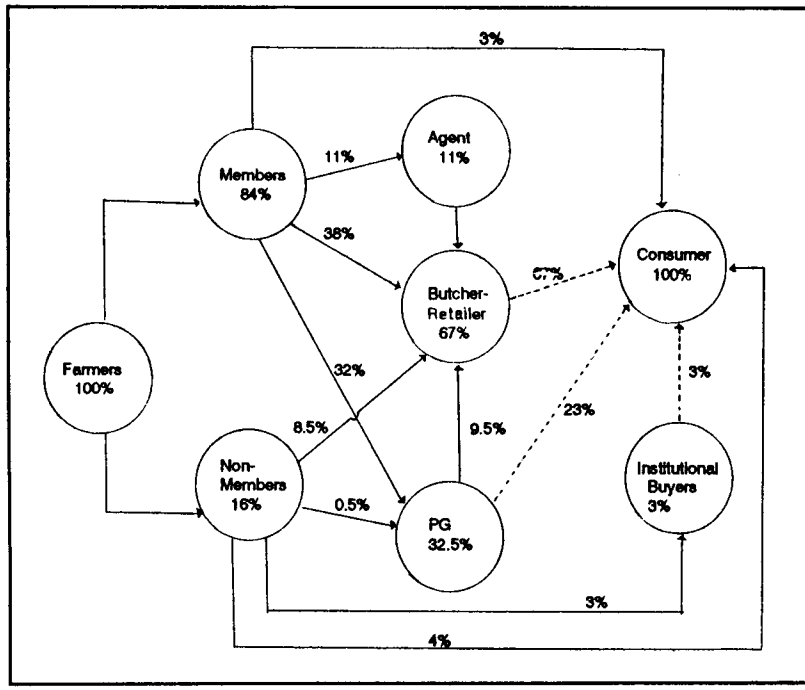

Fig. 10.5. Market channels for hogs in Bicol, 1993.

Production-Marketing system

In Central Luzon where the size of operation is commonly backyard, hogs are marketed live by the raisers. Since the PGs do not procure the product, these are sold to local butcher-wholesalers or butcher-retailers who process and distribute the product to consumers. PGs assume the role of agent to the members. PGs source out buyers and arrange the marketing of the produce without remuneration from the traders.

In Southern Tagalog, the major portion of the hogs produced by the farmers is marketed to the cooperatives and butcher-retailers who process hogs to pork. Barrio buyers also buy a considerable amount of the farmers' produce. The cooperative, however, is not the only market outlet of farmer-members. PGs also buy swine from nonmembers, particularly in areas where traders are not available. In Bicol, swine are marketed live and farmer-members do not sell exclusively to their PGs. PGs handle only a small portion of the farmers' produce. Most of the members sell their hogs to traders because of the high buying price offered and "suki" or regular buyer relationship. Some members of PG2 sold their hogs to the PG because of their membership and relatively

higher buying price offered and credit-marketing tieup with the PG. The favorable price offered by the traders and the inability of PGs to absorb nonmembers' produce encourage them to sell their hogs to private traders. Three PGs directly sell carcass to consumers.

Farmers' attitude toward PGs

The motivation for organizing and joining the PG is the desire of the farmers to avail themselves of the benefits offered by PGs and other government agencies such as access to credit at a lower interest rate, lower price of farm inputs, and the share of benefits by the cooperative. Attitudes of farmer-members toward PGs were determined using two categories namely; reasons for membership and ways of supporting the PG. For Southern Tagalog and Bicol, practically all members (99%) joined the PG to avail themselves of the cooperative services. Another reason for joining the PG is to acquire knowledge and skills on hog production (Table 10.4). The majority of the members from these two regions supported their PGs by patronizing the PGs' goods and services. Others supported their PGs through participation and attendance to all PG activities such as seminars/trainings and meetings.

Table 10.4. Farmers' attitude toward PGs.

Item	Southern Tagalog	Bicol	Philippines
No. of Farmers (n)	100	120	
		Percent	
Reasons for Membership a/			
Develop social life	-	35	35
To avail cooperative service (input and output assistance)	84	42	62
To help own coop/community	6	18	12
Acquire knowledge/education	10	1	6
Source of additional income	-	20	20
Recruited by friends	-	18	18
Ways of Supporting the PG			
Patronizing cooperative's goods and services	84	65	74
Attend regular meetings and other activities	12	35	24
Provide suggestions for improvement	4	-	2

a/ Multiple response.

Services performed by PGs and traders

Almost similar services were performed by PGs and traders. These ranged from input and product procurement to meat retailing (Table 10.5).

In Central Luzon, PGs did not procure the hogs produced by their members. Functions of PGs were limited to input procurement, technical and financial assistance, and market linkaging from the time they started in hog production up to the present. The PGs served as the buyers' agent in the area for free. All PGs in Southern Tagalog and three PGs in Bicol procured hogs from members and retailed carcass to consumers. All PGs in these two regions also performed market searching for the members.

PGs provided the needed inputs of the members. Particularly for Central Luzon, these inputs came from the feed manufacturers who consigned the product to the cooperative. While the policy of the cooperative is the sale of feed to members only, nonmembers could also buy feeds from the cooperative on cash basis at prevailing market prices.

All PGs provided technical and financial assistance to the members with the help of some government institutions such as DA and LBP. With the financial assistance of LBP, PGs were able to extend loans to members at a low interest rate that ranged from 12 to 15 percent per production cycle (6 months) for Central Luzon and 18 to 25 per annum for Bicol. This rate is comparatively lower than the lending rate of 5 to 10 percent per month charged by private money lenders.

In Central Luzon, the amount of loan extended by PGs to members ranged from P10,000 to P40,000 per production cycle. Two thousand pesos divided into two components, the cash and the input components were allocated per head of hog raised. The cash component (P1,000-P1,200) is given to members for the purchase of piglets and the remaining amount is given in the form of feeds. In the region, the cooperative requires its members to acquire their stock from known swine breeders in the area.

In Bicol, financial assistance came in kind in the form of piglets, feeds, and biologics. The amount of assistance also varied among PGs and ranged from P3,000 to P27,900 per member.

Some PGs from Southern Tagalog and Bicol acquired financing from sources such as the Department of Trade and Industry (DTI), Government Service Insurance System (GSIS), and the Social Security System (SSS). Eighty-seven percent of the PGs disseminated market information to the members through word of mouth and by regularly posting them in the cooperative bulletin board.

Like PGs, most traders granted financial assistance to hog raisers in the form of cash advances (Table 10.5). Grading and transport services

Table 10.5. Services performed by PGs and traders.

Services	Central Luzon		Southern Tagalog		Bicol		Philippines	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader
	Number Reporting							
Procurement	-	15	5	5	3	12	8	32
Processing	-	11	4	4	3	8	7	23
Transport	-	15	4	5	4	12	8	32
Grading	-	-	5	5	4	12	9	17
Retailing	-	13	5	5	3	9	8	27
Market	3	6	5	5	5	9	13	20
Information	5	-	5	-	5	-	15	-
Technical Support	5	5	5	-	-	-	10	5
Market Searching and Product Promotion	2	2	5	5	5	3	12	10
Financing	5	11	5	5	5	6	15	22
Wholesaling	-	6	5	5	-	-	5	11

were provided by the traders in Central Luzon and Bicol. In Southern Tagalog, grading is done by both PGs and traders. In grading, ocular inspection is common which serves as the basis for pricing. Traders reduced the buying price for hogs that do not meet their standard such as over aged sows and animals with thick back fat. Some traders also provided market information and technical assistance through free veterinary services.

Four PGs from Southern Tagalog and three from Bicol and 23 traders processed limited quantity of hog meat because only leftover meat for the day was processed into tocino and longanisa.

Buying and selling arrangements

In areas where backyard operations predominate, hogs are marketed live by raisers to butcher-wholesalers or butcher-retailers in the same area. Hogs procured by PGs in Southern Tagalog and Bicol and by traders were picked up either at the cooperative or the raiser's residence. PGs served as the assembly point where hogs are picked up for large volume procurement. Payments were either in cash or credit. Eleven traders also accepted cash and credit as the mode of payment (Table 10.6).

In selling, the majority of PGs and traders sold their products on a pick-up basis as reported by 13 PGs and 14 traders. Two PGs and five traders delivered their products to the buyers. Almost all traders for both regions have meat stalls in the market where carcass is sold. Eleven PGs, four from Central Luzon, three from Southern Tagalog, and four from Bicol required cash payment for the product sold. On the other hand, more traders accepted both cash and delayed payment from buyers. This was practiced especially by those who have permanent stalls in the market and have already established patronage relationship (suki) with their buyers, the consumers.

Marketing Operations and Efficiency

Comparative marketing operations

Marketing operations of PGs and traders are almost similar, especially for Southern Tagalog and Bicol (Table 10.7). No significant difference was observed in the buying price between PGs and traders from Southern Tagalog. Traders from Central Luzon offered a slightly higher buying price of the product compared with other regions. There were no data on buying price for PGs in Central Luzon because they were not involved

Table 10.6. Buying and selling arrangements of PGs and traders.

Item	Central Luzon		Southern Tagalog		Bicol		Philippines	
	PGs	Traders	PGs	Traders	PGs	Traders	PGs	Traders
	No. Reporting							
A. Buying								
Mode of Procurement								
Picked-up from the farm/house	-	15	4	-	5	12	9	27
Delivered	-	-	1	-	-	-	1	-
Mode of Payment								
Cash on delivery	-	6	3	-	2	5	5	11
Credit	-	5	2	-	-	-	2	5
Combination	-	4	-	-	3	7	3	11
B. Selling								
Mode of Sale								
Picked-up by buyer	5	3	3	-	5	11	13	14
Delivered to buyer	-	4	2	-	-	1	2	5
Mode of Payment								
Cash on delivery	4	-	3	-	4	3	11	3
Credit	-	3	2	-	-	-	2	3
Combination	1	12	-	-	1	8	2	20

Table 10.7. Comparative marketing operations of PGs and traders.

Item	Central Luzon		Southern Tagalog		Bicol		Philippines	
	PGs[a]	Traders	PGs	Traders	PGs	Traders	PGs	Traders
Selling Price (P/100 kg)	7,500	7,007	7,750	7,831	6,600	6,500	7,175	7,112
Buying Price (P/100 kg)	6,308	6,471	5,688	5,523	6,253	5,513	5,971	5,836
Marketing Margin (MM)	1,192	536	2,063	2,308	347	987	1,204	1,277
Marketing Cost (MC)	150	167.80	282	322	366	295	324	261.6
Transport	-	51.60	89	133	58	44	73.5	76.2
Commission	-	-	-	-	102	-	51	-
Labor	-	6.40	-	-	100	100	50	35.5
Slaughtering fee	20	75.80	128	138	31	21	19.50	88.63
Food	25	14.40	-	-	8	9	4	7.8
Retailer's fee	-	10	-	-	-	-	-	3.3
Procurement	-	-	27	11	-	-	4	2.7
Packaging	-	-	13	7	-	-	6.5	2.3
Weighing	-	-	3	5	-	-	1.5	1.7
Stall rent	-	-	2	4	8	2	5	2
Water/Electricity	-	-	5	4	13	10	9	4.7
Others	5	9.60	8	10	46	52	27	23.9
Total	150	167.80	282	322	366	295	324	261.6
Total Cost (TC)[b]	6,458	6,638.8	5,950	5,845	6,619	5,808	6,295	6,097.6
Net Profit (NP)	1,042	368.2	1,800	1,985	(19)	692	880	1,015
MC as % of MM	12.58	31.3	13.7	14	105.5	29.9	26.9	20.5
NP as % of TC	16.04	5.6	30.2	34	-	11.9	14	16.6

[a] Just to show the operation of one of the committees of PG2 in Central Luzon. Not included in the computation.

[b] Total cost includes marketing cost plus buying price.

in product procurement. PGs from Bicol offered a slightly higher buying price and a relatively higher selling price. The average marketing margin by the PGs was P1,204 with PGs from Southern Tagalog generating the highest margin of P2,063 per 100 kg carcass. This was attributed to a lower buying price and a relatively higher selling price. The marketing margin obtained by traders was almost similar with that of the PGs. Traders from Central Luzon had the lowest margin of only P536 per 100 kg carcass because of a higher buying price, while those from Southern Tagalog realized the highest amount of P2,308 per 100 kg.

Among PGs, those from Bicol incurred the highest marketing cost of P366 per 100 kg with labor and transport cost contributing the highest. Transport cost was the major cost item for both PGs and traders.

No significant difference in the marketing cost of PGs and traders was observed and the net profit was almost similar for the two groups. PGs from Bicol incurred a net loss from the operation amounting to negative 19 per 100 kg of the product. In contrast, all traders realized a positive net income with those from Central Luzon having the lowest of only P368.20 per 100 kg of carcass. Their margin was relatively low.

Results of the study show that traders are more efficient than PGs as reflected by a lower proportion of the marketing cost to the marketing margin of 20.5 percent compared with 26.9 percent for PGs, while the proportion of net profit to total cost was almost the same for both.

Comparative buying prices of PGs and traders

PGs offered a slightly higher buying price for hogs than traders (Table 10.8). Likewise, farmer-members enjoyed a higher selling price compared with nonmembers. This might be due to the assistance provided by the PGs to members, particularly market searching.

Comparative monthly selling prices of PGs and traders

Prices of both live hogs and carcass fluctuated from time to time (Table 10.9). Lowest prices were observed in October and the highest in December. This is due to the greater demand for the product during this month brought about by the Christmas Season and New Year celebration.

Comparative marketing efficiency

Based on Table 10.10, PGs from Southern Tagalog can deliver the product to the outlet at a lower marketing cost relative to the traders

Table 10.8. Comparative buying prices of PGs and traders, and selling prices of farmer-members and nonmembers (P/ 100 kg liveweight).

	Central Luzon	Southern Tagalog	Bicol	Phil.
Buying Price				
PG		4.40	4.06	4.23
Trader	4.20	4.25	3.58	4.01
Selling Price				
Farmer-members	4.26	4.40	3.71	4.12
Nonmembers	4.22	4.25	3.52	4.00

operating in the same area. This indicates a higher level of efficiency of the marketing system where PGs were involved. On the other hand, it was the opposite for Bicol. Traders incurred a lower marketing cost compared with PGs. This might be attributed to the higher volume of product handled by traders and extent of capital utilization.

Because of differences in functions performed by PGs and traders in Central Luzon, no comparison can be made. PGs and traders complement each other in the upper portion of the marketing chain. PGs served as the buyers' agent in the area and arranged for the disposal of the members' produce. Looking, however, at the marketing operation of PG2 in Central Luzon, marketing cost of only P150 per 100 kg carcass was incurred indicating greater efficiency compared with other PGs and traders.

From Table 10.10, PGs were relatively price efficient compared with traders because they were buying at a higher price and selling at a lower price. As a result, the net margin of PGs was also lower. Despite the lower net income by PGs, the impact of the policy to the welfare of the members and the consumers was expected to be higher. This conforms with the objective of the cooperative to maximize the welfare of the members.

Marketing Constraint and Coping Mechanism

Lack of capital for marketing activities and low prices for the product due to oversupply were the most common problems of PGs (Table 10.11). Low farm gate prices were experienced by PGs in 1992 when big commercial hog raisers lowered their price because of oversupply. Because of the perishable characteristic of the product and the immediate need for cash by raisers, most often buyers dictated the price as reported

Table 10.9. Comparative monthly selling prices of PGs and traders, 1993 (P/100 kg).[a]

Month	Southern Tagalog				Bicol				Philippines			
	PG		Trader		PG		Trader		PG		Trader	
	L	C	L	C	L	C	L	C	L	C	L	C
January	4.00	6.80	4.21	6.90	-	6.26	-	6.27	4.00	6.53	4.21	6.58
February	4.00	6.90	4.10	7.00	-	6.22	-	6.23	4.00	6.56	4.10	6.61
March	4.00	6.90	4.10	7.00	-	6.24	-	6.24	4.00	6.57	4.10	6.62
April	4.20	7.10	4.30	7.20	-	6.23	-	6.24	4.20	6.66	4.30	6.72
May	4.20	7.10	4.30	7.20	-	6.30	-	6.28	4.20	6.70	4.30	6.74
June	4.30	7.20	4.40	7.30	-	6.26	-	6.24	4.30	6.73	4.40	6.77
July	4.00	6.95	4.15	7.05	-	6.22	-	6.22	4.05	6.58	4.15	6.62
August	4.05	6.95	4.15	7.05	-	6.21	-	6.22	4.05	6.58	4.15	6.63
September	4.05	6.95	4.15	7.05	-	6.25	-	6.25	4.05	6.60	4.15	6.65
October	3.95	6.85	4.05	6.95	-	6.25	-	6.24	3.95	6.55	4.05	6.59
November	4.25	7.15	4.35	7.25	-	6.21	-	6.22	4.25	6.68	4.35	6.73
December	4.45	7.35	4.55	7.45	-	-	-	-	4.45	7.35	4.55	7.45

[a] L- liveweight
C- carcass

Table 10.10. Comparative marketing efficiency of PGs and traders.

	Central Luzon		Southern Tagalog		Bicol		Philippines	
	PG[a]	Trader	PG	Trader	PG	Trader	PG	Trader
Operational Efficiency								
Marketing cost	150	167.8	282	322	366	295	324	261.6
Extent of capacity utilization (CEU)[b]								
Weighing scale	-	100	86	71	71	95	79	89
Jeep	-	100	33	32	-	-	33	66
Freezer	-	-	57	58	71	95	64	77
Meat grinder	-	-	18	-	-	-	18	-
Pig pen	-	100	-	-	-	-	-	100
Pricing Efficiency (P/100 kg)								
Buying price	6,308	6,471	5,688	5,523	6,253	5,513	5,971	5,836
Selling price	7,500	7,007	7,750	7,831	6,600	6,500	7,175	7,112
Margin	1,192	536	2,063	2,308	347	987	1,204	1,277
Financial Viability								
Net profit for the year[c]	70,439	461,905	47,153	236,226	21,560	72,576	34,357	256,902
Return on investment[d]	-	28.2	7.6	10.8	4	18	5.8	19

[a] No available data for Central Luzon.

[b] Just to show marketing efficiency of the PG2 swine committee.

[c] Net income x volume handled by trader.

[d] ROI= net income/total capitalization x 100.

Table 10.11. Constraints and coping mechanisms[a] and support services provided by different agencies.

Constraints/Coping Mechanisms	Central Luzon	Southern Tagalog	Bicol	Philippines
Constraints				
Low price of hogs due to oversupply	4	5	4	13
Lack of capital for marketing activities	-	5	4	9
Big producers are competitors of the coop	1	-	-	1
Nonrepayment of loans by members	3	-	-	3
Buyers control price of hogs	2	-	-	2
No buyers	1	-	2	3
Some buyers buy at a higher price but at delayed payment	1	-	-	1
Marketing agreement is not followed if there is oversupply in the market	1	-	-	1
High price of feeds and low price of hogs	1	-	-	1
Poor farm-to-market roads	-	5	-	5
No processing facilities	-	4	4	8
Low-quality feeds	-	-	1	1
Coping Mechanisms				
Accept the price offered by buyers	3	-	2	5
Send notice to members	2	-	-	2
Accept payment in kind	1	-	-	1
Just wait for the payment	1	-	-	1
Just sell the hogs because the farmer needs money	1	-	1	2
Avail loan	-	-	3	3
Arrange long-term credit with supplier of feeds	-	-	2	2
Rent transport facilities	-	-	1	1
Borrow some of the members' facilities	-	-	1	1
Just slaughter the hogs and sell them on credit to members	2	2	-	4

Table 10.11. (Continued).

Constraints/Coping Mechanisms	Central Luzon	Southern Tagalog	Bicol	Philippines
Butcher the hogs and sell them to members processed to longganisa and tocino	-	1	-	1
Transport/Sell the animals to other markets in Metro Manila	-	1	-	1
Butcher the animals and sell them to institutional buyers in the city (restaurant)	-	1	-	1
Do market searching	-	-	2	2
Produce local feed ingredients	-	-	1	1

[a] Other PGs did not give coping mechanisms.

by two PGs. Lack of processing facilities and high price of production inputs such as feeds and poor farm-to-market roads were also cited by PGs.

Because of the market structure at the buyers' side where few buyers control the market in Central Luzon, breach of marketing agreement and delayed payment were also common.

To cope with the price problems, four PGs mostly from Southern Tagalog just slaughtered the animals and sold the meat to members on credit. Some PGs had no choice, but to accept the price offered by buyers because of their need for cash. In Central Luzon, there were instances when because of the very low price for live hogs, the PG just slaughtered the animals and sold the meat to members on credit payable by palay after harvest. The PG required one cavan of dried palay for 2.5 kg pork. Other PGs had no choice, but to accept the price offered by buyers as reported by three PGS from Central Luzon and two from Bicol.

To cope with financial problems, some PGs from Southern Tagalog and Bicol resorted to borrowing from other government institutions such as DOST, DTI, Department of Social Welfare and Development (DSWD) and from nongovernment organizations (NGOs). Some PGs arranged long-term credit with input suppliers.

To improve swine marketing, PGs and members in Central Luzon suggested that there should be price support for swine at the farm level to enable small raisers to compete with big commercial raisers. They also suggested that farm inputs, particularly feeds, be included under price control. To minimize price fluctuations and oversupply of hogs, PGs

suggested the scheduling of the release of loans for hog fattening by LBP to different PGs. For raisers to receive higher price for their produce, PGs suggested that they should be supported financially by the government to enable them to procure hogs from members and compete with traders.

Support Services to PGs

Financial and technical assistance were the two most common services availed of by PGs from GOs and NGOs (Table 10.12). Loans at an interest rate of 12 percent per annum were extended by LBP. Technical assistance was provided by DA, CDA. and the Bureau of Animal Industry (BAI) by serving as resource persons in training and seminars to cooperative members and providing free veterinary services as reported by three PGs in Central Luzon and Southern Tagalog, and four from Bicol. Other government agencies that provided support services to PGs were DOST, DTI, DSWD, Agricultural Credit and Cooperative Institute (ACCI), Department of Agrarian Reform (DAR), National Postharvest Institute for Research and Extension (NAPHIRE), GSIS, and SSS.

Some feed manufacturers/suppliers also helped PGs in the form of feed discounts and technical and financial assistance. Some private institutions and NGOs also extended assistance to PGs by giving office supplies and free veterinary services. No marketing assistance was reported to have been provided by the government to PGs. This might be one reason why no PG in Central Luzon attempted to venture on hog procurement and distribution. The technical and financial assistance provided by the GOs and NGOs may have alleviated somehow the constraints encountered by raisers.

Benefits Derived by Farmer-Members from PGs

Benefits enjoyed by members from PGs are presented in Table 10.13. These include dividends, patronage refund, higher price for the output, gain due to timely marketing of the products, lower price of farm inputs, and lower interest on loans.

PGs in Southern Tagalog and Bicol distributed dividends (813) and patronage refund (159). PGs in Southern Tagalog gave higher dividends amounting to P1,281 per member. This indicates better patronage by members and more profitable operation of the cooperative. Central Luzon has not declared any dividend and patronage refund to members since the time the cooperative started its operation. The amount intended for the purpose was added to their buildup capital. However, PGs in the region plan to give dividends in the future.

Table 10.12. Support services availed of by PGs.

Support Services	Central Luzon	Southern Tagalog	Bicol	Philippines
		Number Reporting		
Government				
LBP				
financial assistance	5	3	4	12
conducts management training	1	-	-	1
CDA/DA/BAI				
technical backstopping/ trainings on swine production/management	3	3	4	10
conducts management training	1	-	5	6
financial assistance through loans under CDF (Countrywide Development Fund)	-	1	-	1
DTI				
technical assistance on swine raising & vaccination	-	1	-	1
financial assistance through loans	-	-	1	1
DSWD				
financial assistance	-	-	1	1
DOST				
financial assistance	2	-	1	3
training/seminar	-	-	2	2
ACCI, UPLB				
training	-	1	-	1
GSIS, SSS				
financial assistance	-	1	-	1
DAR/NAPHIRE				
facility loan	-	1	-	1
NGO				
Feed suppliers/ manufacturers				
feed price discounts	2	-		2
technical/financial assistance and trainings	-	1	2	3
assistance of veterinarian	1	-	-	1
push cart and thermos	1	-	-	1

Table 10.12. (Continued).

Support Services	Central Luzon	Southern Tagalog	Bicol	Philippines
		Number Reporting		
Dutch Rural Development Assistance Program	-	1	-	1
Rotary Club/Kiwanis awarding of prizes	-	1	-	1
CAFFMACO input linkages	-	1	-	1

Among the benefits enjoyed by the members, interest rate differential was the highest. PGs charged the members an interest on loan comparatively lower than the existing lending rate charged by the private money lenders. In Central Luzon, PGs charged 9 to 12 percent per production cycle (6 months) compared with the 10 percent per month charged by the private money lenders, while in Bicol, interest rate ranged from 18 to 25 percent per annum.

Members also benefitted from the lower input prices and higher output prices. Member-raisers from Bicol enjoyed higher gain from output price differential amounting to an average of ₱526 per member. As observed, PGs that generated higher benefits for members were those with small membership.

Member-raisers from Central Luzon also gained from the timely marketing of their hogs with the help of PGs in sourcing out buyers. Because of this, farmers saved from the cost of feeds supposedly eaten by the animals had marketing been delayed. PGs in the region also provided other forms of benefits to member-raisers such as giving financial assistance when a family member dies, and rice and grocery assistance from the coop store on credit.

Other benefits derived by the members in joining the coop included free training and technical assistance with the help of GOs and NGOs.

Comparison of Net Income

The net incomes of farmer-members and nonmembers were not significantly different (Table 10.14). For Central Luzon and Southern Tagalog, net income were positive and higher compared with those of nonmembers, while PG members in Bicol incurred losses amounting to P447.20 per head of the animal raised. Despite this, the other forms of

Table 10.13. Benefits to farmer-members from PG (pesos).

Benefits	Central Luzon		Southern Tagalog		Bicol		Phillippines	
	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member	Per PG	Per Member
Dividends/Interest on Share	-	-	1,231,889	1,281	8,270	345	620,090	813
Patronage Refund	-	-	7,072	11	7,345	306	7,208	159
Output Price Differential	-	-	6,334	6	12,618	526	946	966
Gain Due to Timely Marketing of Hogs	1,017,140	1,934	-	-	-	1,017,140	1,934	
Input Price Differential/ Discount/Rebate	-	-	3,759	49	255	11	2.007	30
Interest Rate Differential	4,167,945	7,924	739,600	995	16,429	624	1,641,325	3,201
Other Incomes[a]	374,193	711	382,534	436	28,092	1,171	271,606	773

[a] Other incomes include:
membership fees, interest from banks, service fees, earnings from consumer's store, feeds store, feed mill, other services such as credit, water, processing.

Table 10.14. Comparison of net income of farmer-members and nonmembers (pesos).

	Central Luzon	Southern Tagalog	Bicol	Philippines
Member				
Per farm	38,772	12,021	(528)	16,755
Per head	1,939	888	(447)	793
Per 100 kg	-	100	(6.74)	47
Nonmember				
Per farm	33,732	9,183	(385.80)	14,176
Per head	1,687	917	(342.20)	754
Per 100 kg	-	111	(5.51)	53

benefits enjoyed by members, as indicated in Table 10.13, put them on an advantage over nonmembers.

Activities of PGs

Trainings/Seminars and meetings were the most common activities of the PGs attended by members (Table 10.15). In Central Luzon, attendance in trainings on swine production was a requisite by the PGs for the release of loans. The majority of the members from Bicol were supportive of their PGs as reflected by a higher attendance in assembly and monthly meetings. Thirty-five percent were able to attend at least one training and seminar. Officers of the cooperative from all PGs were also able to attend trainings/seminars in management on a scheduled basis. Such trainings were sponsored by the different government agencies such as DA and CDA.

Reasons for Selling to PGs

The major reason given by members for selling their product to PGs was to avail themselves of the patronage refund as reported by 81 percent of the respondents from Southern Tagalog and Bicol (Table 10.16). Other members realized that it is their responsibility to patronize their cooperative and one way to show this is by selling their produce to the cooperative. Another reason which might have made them decide to sell to the cooperative is because of higher buying price offered by the cooperative. About 70 percent of the members from Southern Tagalog and Bicol expressed satisfaction on the financial and input assistance of PGs. Few members, however, expressed satisfaction on the product procurement of the PGs showing that PGs cannot really meet the

Table 10.15. PG activities attended by members.

Item	Central Luzon		Southern Tagalog		Bicol		Philippines	
	No.	%	No.	%	No.	%	No.	%
Activities								
Assembly	-	-	-	-	-	54	-	54
Monthly meetings								
10-12/yr	-	-	2	10	-	53	-	32
10/yr and below	-	-	18	90	-	35	18	62.5
Related trainings/ seminars								
One	85	55.9	-	-	-	35	-	45.5
Two	11	7.2	-	-	-	21	-	14.1
Three	2	1.3	-	-	-	20	2	10.7
More than 3	-	-	20	100	-	-	20	100

members' marketing requirements. Also, very few of them were satisfied on the management of the cooperative.

Summary and Conclusions

The study was undertaken to determine the advantages that cooperatives or PGs may have over alternative marketing channels for swine in the Philippines. Specifically, it addresses the issue of whether the formation of a cooperative can induce marketing efficiency and improve the social and economic well-being of farmer-members.

The study covered three regions, namely Central Luzon, Southern Tagalog, and Bicol, considered as the major swine producers in the country.

Results showed that most PGs are relatively new and started with modest capitalization coming from members' share. Members were motivated to join the PGs to avail themselves of services offered by PGs and other government agencies such as credit.

PGs and traders performed similar services. Except for PGs in Central Luzon and two PGs in Bicol, both PGs and traders performed product procurement and distribution.

Table 10.16. Reasons for selling the commodity to PG and number of farmers who expressed satisfaction in PG service (percent).

Item	Southern Tagalog[a]	Bicol[a]	Phil.[a]
Reasons for Selling to PG			
Offers higher price	-	3	3
PG is a regular buyer	15	3	9
Responsibility as member	83	16	50
To avail of patronage refund	81	-	81
Part of credit marketing link	-	3	3
Satisfaction in PG Services			
Financing	83	59	71
Input assistance	88	47	68
Procurement	23	-	23
High buying price	-	10	10
Provision of price information	63	-	63
Good management		5	5
High-quality product sold		11	11

[a] No available data

Hogs produced by members were sold live and were picked up by the buyers from the farmer's house. Grades of the animal served as the basis for pricing.

PGs from Bicol incurred a net loss from the operation amounting to P19 per 100 kilogram of the product handled. Traders, on the other hand, realized positive net income from their operation with those from Central Luzon, realizing the lowest net income amounting to only P368.20 for every 100 kilogram of carcass handled.

Analysis of the operation of PGs and traders shows that traders are more efficient than PGs as reflected by a lower proportion of the marketing cost to marketing margin of 20.5 percent compared with 26.9 percent for PGs. Net margin of the PGs was lower compared with that of traders.

Lack of capital for marketing operation and low prices for the product were the PGs' most common problems. As a solution, some PGs slaughtered the animals and sold the meat to members either in cash or credit basis. To cope with the financial problems, some PGs borrowed from some government institutions and arranged long-term credit with input suppliers.

Some government agencies and private institutions played a major role in the establishment and operation of PGs. The heavy impact was

through the financial support at a lower interest rate and technical assistance for free. No marketing assistance was reported to have been provided by the government to PGs.

Lower interest on loans, dividends, and patronage refund and ready supply of inputs were some of the benefits derived by members from PGs. These created positive impact on the income of farmer-members, particularly for Central Luzon and Southern Tagalog and put them on a better position over nonmembers.

The presence of the PG in the marketing chain, particularly for Southern Tagalog proved to be advantageous considering the low marketing cost they incurred relative to that of the traders. Although PGs have not been effective in promoting the overall welfare of their members, farmer-raisers are better off in joining the cooperatives. Strengthening the management capabilities of the cooperative and providing marketing and financial assistance may enhance the efficiency of the PG operation and improve the plight of the members in the future.

Recommendations

1. Lending institutions like LBP should provide funding assistance to well-managed and prompt-paying PGs for the construction and purchase of marketing facilities such as those for transport and processing. This will enable the PGs to procure and market the members' produce and will provide them a bigger share of the swine market.

2. Federation of primary cooperatives could be formed to handle input procurement, processing, and product distribution. Organizing activities could be handled by CDA, DA, and NGOs.

3. Management trainings for cooperative officers should be provided. This will strengthen their management capabilities for the successful PG operation. Seminars on values should also be provided to members. This may make them aware of their duties and responsibilities as cooperative members. Trainings can be handled by CDA, DA, and SCUs.

4. Government subsidy for farm inputs, particularly for feeds that account for about 65 percent of production cost will help small raisers to be more competitive in the market. Increased local corn production and other indigenous sources of animal feeds may also be an alternative to reduce production cost. DA and SCUs can help in this regard.

5. To minimize problems of lower farm prices, establishment of marketing facilities such as auction markets in strategic places in each province is recommended. Rehabilitation of the existing abbatoir and construction of new ones in areas without facilities will help. Marketing information and monitoring office should be created to take charge of the market information dissemination. The DA, CDA, and LGUs can handle this work.

Part V

Integration

Chapter 11

Marketing of Agricultural Commodities by Producer Groups in the Philippines

Aida R. Librero and Anita G. Tidon

The study aimed to analyze the performance of the producer groups (PGs) and rural-based farmer organizations engaged in marketing agricultural commodities in the Philippines. Implemented in six regions, the study covered the following commodities:

Region	*Commodities*
Cagayan Valley	rice, corn, banana
Central Luzon	rice, onion, swine
Southern Tagalog	coconut, corn, cattle, swine
Bicol	rice, coconut, swine
Eastern Visayas	rootcrops, coconut
Central and Southern Mindanao	rice, corn, fruits

The study used both primary and secondary data. Primary data were collected through personal interviews of farmers, traders, and officials of PGs. A total of 89 PGs were studied along with 2,063 farmer-members, 1,146 farmer-nonmembers (i.e., not members of PGs, and 328 traders). Key informant interviews were also conducted to have an in-depth assessment of the PG and trader operations. Primary data refer to 1993.

Characteristics of PGs

The surveyed PGs were mostly formal organizations (Table 11.1). These are multipurpose cooperatives and marketing cooperatives registered with the Cooperative Development Authority (CDA). Informal farmers'associations were represented by five groups in root crops and two in fruits.

Table 11.1. Some characteristics of the sample PGs.

Item	Type of PG by Commodity								
	Rice	Corn	Coconut	Root Crops	Fruits	Onions	Cattle	Swine	All PGs
No. Reporting	20	14	15	5	10	5	5	15	89
Nature/Function									
Multipurpose coop	20	14	14	-	8	4	5	15	80
Marketing coop	-	-	1	-	-	1	-	-	2
Farmers' association	-	-	-	5	2	-	-	-	7
Year Established									
Before 1980	3	3	2	-	-	-	1	3	12
1981-1990	11	6	5	4	5	3	4	8	46
1991-1994	6	5	8	1	5	2	-	4	31
Capitalization (P'000)									
Initial	79	221	10.03	5.78	87	288.3	39.8	a/	730.91
Current	324	1,119	151.58	12.07	247	2,117.8	85.3	a/	4,787.66
Membership									
Initial	40	83	47	20	38	39	25	a/	292
Current	294	612	68	31	69	137	301	a/	1,512

a/ Data not available.

Over one half (51%) of all the surveyed PGs were established between 1981 and 1990, 34 percent between 1991 and 1994 and the rest before 1980. Initial membership ranged from 20 to 83 and this grew from 31 to 984 at the time of the survey.

Root crop PGs had the lowest capitalization, initially at P5,780, but presently P12,070. Onion PGs had the biggest capitalization, starting with P288,300, but increased to P2.12 million at the time of the survey.

Farmers' Attitude Towards PGs

Farmers joined PGs for a number of reasons: (a) to avail themselves of credit and other benefits; (b) to increase their income and uplift their living condition; (c) to have an assured market for their produce; and (d) to acquire/enrich their knowledge about cooperatives (Table 11.2). Others were just convinced by other members to join.

To support PGs, farmer-members reported doing the following: (a) attended regular PG meetings; (b) supported and participated in PG activities; (c) patronized PG products; and (d) paid their dues to the PG on time.

Members expressed high hopes for their respective PGs noting their great potential if (a) there was unity and cooperation among members; (b) PGs had adequate operational capital and were managed by competent officers; (c) PGs can address the financial needs of members; and (d) if members participated and were supportive of all PG activities.

Marketing Operations and Services

In general, these PGs were basically organized to serve as conduits to loans/ financial assistance from government and private lending institutions. Thus, the basic service these PGs provided was credit to farmer-members (Table 11.3). Aside from this, however, PGs also provided marketing services, the most common of which were procurement, grading, and transporting of farmers' produce from the farm gate to the warehouse/storage house. The majority sold the products to local buyers either in wholesale or retail. About one-half were in fact engaged in wholesaling and 43 percent in retailing. The rest were not engaged in direct selling, but acted as intermediary between farmers and buyers or local traders.

To a certain extent, traders also provided financing to farmers as an assurance that the farm produce would be sold to them (traders). Traders also provided such services as procurement, transporting, financing, packaging, grading, drying, and storing. One-third of the surveyed traders also provided market information to farmers.

Table 11.2. Farmer-members' attitude towards PGs.

Item	Type of PG by Commodity					
	Rice	Corn	Coconut	Root Crops	Fruits	Swine
No. of Farmers Reporting	387	306	317	77	206	220
			Percent			
Reasons for Membership to PG						
To increase income and uplift living condition	22	40	25	65	46	20
To have assured market for farm produce	7	-	3	21	28	-
To acquire/enrich knowledge on cooperative	-	-	9	14	-	6
To avail of credit and other benefits	88	74	37	-	66	82
To help other producers and foster unity among them	19	7	23	-	-	-
Convinced by friends, relatives/other members	9	6	7	-	19	18
To help the coop	-	-	-	-	-	12
Others [a]	4	-	-	-	12	35
Ways of Supporting the PG						
Attendance to regular meeting	54	44	21	45	-	18
Support/Participate in all PG activities	12	19	49	48	18	-
Sell produce to PG	48	-	33	6	18	63
Patronize PG products	22	60	-	-	5	-
By paying dues	18	55	-	-	27	-
Working voluntarily	2	-	-	-	-	-
Promote use of postharvest facilities	15	-	-	-	-	-
Others	-	-	[b]	-	[c]	-

Table 11.2. Continued.

Item	Type of PG by Commodity					
	Rice	Corn	Coconut	Root Crops	Fruits	Swine
No. of Farmers Reporting	387	306	317	77	206	220
				Percent		
The PG has a Great Potential if						
a. There is unity among members	-	37	14	43	-	-
b. It gives additional income	-	15	22	57	-	-
c. It has adequate capital	11	35	10	-	21	-
d. It is handled by competent officers	19	20	4	-	16	-
e. It addresses the financial needs of members	16	13	45	-	-	27
f. It has complete postharvert facilities	24	-	-	-	16	-
g. All members participate and be supportive of all PG activities	7	-	-	-	25	-
h. Others	d	-	-	-	-	e
i. No comments	14	4	2	-	-	-

[a] To be assured of stable price for produce; to develop social life.
[b] By conducting membership campaign (2%) and render free service (7%).
[c] Help promote the produce (27%); help solve problems (16%); help acquire volume demanded (14%).
[d] All members will sell to the PG.
[e] Provide production inputs (41%); provide livelihood (17%); acquire new capital (6%); provide training (12%).

Table 11.3. Marketing and other services provided by PGs and traders.

Services	PGs		Traders	
	Number	Percent	Number	Percent
Number Reporting	89		322	
Procurement	75	84	248	77
Drying	38	42	152	47
Processing	25	28	97	30
Grading	65	72	165	51
Storing	48	53	148	46
Packaging	48	53	166	52
Transporting	58	64	216	67
Financing	81	90	205	64
Wholesaling	45	50	103	32
Retailing	39	43	116	36
Market Information	74	82	119	37
Linkaging	22	24	61	19
Training	55	61	8	2
Market Promotion	14	16	14	4
Technology Support	34	38	13	4
Input Sale	8	8	39	12
Assembling	5	5	5	2
Hauling	2	2	4	1
Market Searching	6	6	6	2
Market Search and Product Promotion	12	13	10	3

Marketing Arrangement

The majority of PGs engaged in trading palay/rice, corn, onion, and swine picked up the farmers' produce from designated assembly points in the production sites (Table 11.4). On the other hand, coconut PGs and traders generally had their sources delivered the product (copra) to the office or storage places, except when the farmers' place was inaccessible.

Farmers were either (a) given cash advance as payment for the produce; (b) paid in cash upon delivery of the produce (COD); (c) paid at a latter time (credit); or (d) a combination of any of these three modes.

Most PGs paid the farmers through COD and cash advance. The majority of traders paid the farmers through COD.

Comparative Marketing Operation and Efficiency

Traders usually have the facilities and capital to buy in bulk. Thus, the survey revealed that traders handled a greater volume of farm produce compared with PGs which were usually saddled with lack of operational capital and necessary facilities to enable them to buy in bulk.

As shown in Table 11.5, palay traders handled twice as much volume than PGs. Rice traders handled almost ten times more. Bigger volumes were also handled by corn traders, especially those in Mindanao which is a major corn producing area in the country. Copra, root crops, onion, and livestock marketing is likewise in the hands of the traders as they handled a large chunk of the market.

The marketing efficiency of PGs was compared with that of traders by analyzing their buying and selling prices, margins, marketing costs, and net incomes. Analysis was done in terms of commodities handled.

For rice, both PGs and traders may sell palay or milled rice. When trading palay, PGs incurred a higher marketing margin (P7 higher) than traders because of higher selling price of the former. The marketing cost incurred by PGs from palay trading as a whole was P2 higher than that incurred by traders. Thus, traders were more operationally cost efficient. In terms of profit, however, the PGs still realized a slightly higher net return than traders despite the higher marketing cost largely because of their ability to sell at higher prices.

For milled rice, PGs, on the average, realized lower marketing margins than traders at P216/100 kg and P256/100 kg, respectively (Table 11.5). This was because their selling prices were much lower than those of traders. Moreover, they also incurred higher marketing cost. On the average, the rice PGs were economically less efficient than traders. However, the margin derived by the rice PGs was almost five

Table 11.4. Marketing arrangements.

Item	Rice		Corn		Coconut		Rootcrops		Onion		Swine		Total	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Number Reporting	20	69	14	65	15	39	3	22	5	12	15	45	72	252
Buying														
Mode of Procurement														
Picked up from source	17	48	9	4	1	2	3	-	5	12	9	27	44	93
Delivered to buyer	2	19	5	61	11	23	-	-	-	-	1	-	19	103
Both	1	2	-	-	3	14	-	22	-	-	-	-	4	38
Mode of Payment														
Cash on delivery (COD)	2	53	2	3	2	15	2	16	2	8	5	11	15	106
Credit	2	5	5	34	-	-	-	-	2	-	2	5	11	44
Cash advance	3	11	-	-	-	-	-	-	-	-	-	-	1	11
COD and cash advance	11	-	7	11	13	24	1	-	-	2	-	-	32	37
COD and credit	2	-	-	-	-	-	-	6	1	2	3	11	6	19
Selling														
Mode of Sale														
Picked up by the buyer	9	16	7	27	5	8	1	-	5	5	13	14	40	70
Delivered to the buyer	6	52	2	38	9	25	-	-	-	7	2	5	19	127
Both	5	1	5	-	1	6	2	22	-	-	-	-	13	29
Mode of Payment														
COD	5	68	12	64	14	30	3	22	1	9	11	3	46	196
Credit	2	1	-	1	-	-	-	-	-	1	2	3	4	6
COD and credit	1	-	-	-	1	-	-	-	-	2	-	20	2	22
COD and cash advance	5	-	2	-	-	9	-	-	-	-	2	-	9	9
Cheque	7	-	-	-	-	-	-	-	2	-	-	-	9	0
Cash and cheque	-	-	-	-	-	-	-	-	2	-	-	-	2	0

Table 11.5. Comparison of marketing operations between PGs and traders.

Item	Volume Handled a/		Selling Price b/		Buying Price b/		Marketing Margin b/		Marketing Cost b/		Net Profit b/		Marketing Cost as % of Marketing Margin		Net Profit as % of Marketing Margin	
	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader	PG	Trader
Palay	266.00	437.00	536.00	514.00	488.00	472.00	48.00	41.00	29.00	26.00	18.00	15.00	60.42	63.00	39.58	36.59
Rice	105.00	1,064.00	1,095.00	1,099.00	879.00	843.00	216.00	256.00	95.00	84.00	121.00	172.00	45.00	35.00	55.00	65.00
Coconut (Copra)	60.73	840.49	620.80	663.77	540.67	560.88	80.13	102.89	32.65	51.20	47.48	51.69	40.75	49.76	59.25	50.24
Onion	345.94	895.80	1,275.00	790.00	748.00	693.00	527.00	97.00	307.00	63.30	220.00	33.00	58.25	65.26	41.75	34.02
Corn																
Cagayan Valley																
Yellow corn	204.00	503.00	523.00	519.00	477.00	484.00	46.00	35.00	32.00	21.00	14.00	14.00	70.00	60.00	30.00	40.00
White corn	41.00	184.00	594.00	577.00	511.00	533.00	83.00	44.00	29.00	21.75	54.00	22.00	35.00	49.00	65.00	51.00
Southern Tagalog																
Yellow corn	324.00	140.00	480.00	425.00	412.00	387.00	68.00	38.00	49.90	10.95	18.00	27.00	73.00	29.00	27.00	71.00
Feeds	5,371.00	8,000.00	330.00	330.00	311.00	311.00	19.00	19.00	3.01	2.95	16.00	16.00	16.00	16.00	84.00	84.00
Mindanao																
Yellow Corn																
Grain	4,200.00	10,012.00	459.00	477.00	367.00	392.00	92.00	85.00	32.84	25.72	59.00	237.00	36.00	30.00	64.00	70.00
Grits	157.00	193.00	795.00	756.00	533.00	578.00	262.00	187.00	25.07	26.30	59.00	152.00	10.00	15.00	90.00	85.00
Rootcrops																
Fresh cassava	6,600.00	16,920.00	66.00	167.00	27.00	88.00	39.00	79.00	2.00	34.00	37.00	45.00	5.13	43.03	127.59	36.88
Swine	100.00	100.00	7,175.00	7,112.00	5,971.00	5,836.00	1,204.00	1,277.00	324.00	261.60	880.00	1,015.00	26.90	20.50	14.00	16.60
Cattle	26,714.00	7,921.00	95.80	105.25	78.73	89.17	17.07	16.08	0.56	0.56	16.51	15.53	3.28	3.48	96.72	96.58

a/ In mt for palay/rice and coconut; in 100 kg for corn, onion, and swine, in kg for root crops.
b/ In P/100 kg for rice, corn, root crops, and swine; P/mt for coconut; P/kg for poultry.

times greater than that of PGs selling palay. Their net profits were also greater.

For coconut, the product form marketed is copra. As earlier stated, traders handled bigger volumes of copra than PGs. This can be attributed largely to the availability of facilities and capital to handle greater copra volumes than the PG counterparts.

As a whole, PGs sold copra at lower prices than traders. Hence, PGs also realized lower marketing margins compared with traders. A much higher marketing cost (P51.20), however, was incurred by traders even if they handled large volumes of copra. This was due to the extremely high traders' cost in Bicol of P100/100 kg. If this is excluded, the average marketing would have been P23.90. In other study areas (Bicol and Eastern Visayas), PGs incurred higher cost than traders. In terms of net profit, however, traders still realized higher net profits despite higher cost. This was due to the higher margin they obtained compared with the PGs. In sum, copra PGs were in a less-competitive position than traders because of their small-scale operation and inadequate facilities which may have contributed to some pricing inefficiency. It might have been possible for them to obtain better prices if they had large volumes of copra and the necessary facilities.

For corn, the common product form traded was shelled corn. However, one PG in Southern Tagalog engaged in feed milling and two PGs in Central and Southern Mindanao traded corn grits.

On the average, the buying price of yellow and white corn by PGs in Cagayan Valley was lower than that of traders. Moreover, their selling price was higher than that of the traders. This gave them a marketing margin relatively higher than that obtained by traders. In terms of marketing cost, however, traders incurred lower cost, despite the large volume handled. Thus, the traders in Cagayan Valley were more cost efficient than PGs.

In Southern Tagalog, PGs bought yellow corn from farmers at higher prices than those offered by the traders and also sold them at equally higher prices. PGs obtained higher marketing margin of P68/100 kg compared with traders' margin of P38/100 kg. However, PGs incurred higher marketing cost because of high salaries and wages, incentives/ commissions,and interest expense which the traders did not have to pay. This lowered the net income of PGs' even approximating that of the income obtained by traders.

In Central and Southern Mindanao, traders of grains and grits offered higher prices than PGs. This served as an incentive for farmers to take their produce to the traders' stations which were mostly located in municipal centers. Grains were sold by traders also at higher prices, thus, reducing their marketing margins.

In feed milling, the PG and traders had the same buying and selling prices and more or less the same marketing costs. The PG and traders dealt with the same outlets.

For onions, PGs were selling at a much higher price (P1,275/100 kg) than traders (P790). Their procurement price was also higher (P748) compared with the latter (P693). Compared with traders, PGs also obtained a higher marketing margin (P527). PGs, however, incurred higher marketing cost relative to the margin because of high storage cost which traders did not incur. In terms of efficiency, however, traders had less marketing cost, and thus, seemed to be more efficient than PGs. One of the major problems of PGs was the high deterioration rate of onions. PGs suffered lossess from stored onions because of power interruption in the storage house.

For root crops, except for one PG handling fresh cassava, the other PGs surveyed had varied roles and functions and handled different product forms, hence it was difficult to compare their activities with those of the root crops traders. Evaluation of marketing efficiency centered on the PG and traders handling fresh cassava. PGs' selling price was much lower than that of traders. PGs performed little marketing function and, thus, incurred less marketing cost compared with the traders. Despite this, its net profit was much lower than that of traders because of lower marketing margin.

For swine, the marketing operations of the PGs and traders were almost similar. Buying and selling prices of PGs were only slightly higher than those of traders. The marketing margins obtained by both were also almost similar. However, the higher marketing cost incurred by PGs pulled down their net income. Henceforth, the study showed that traders were more efficient as reflected by the lower marketing cost and a lower proportion of marketing cost to margin.

For cattle, results of the study did not provide a clear indication of the relative efficiency of PGs under study. It was noted that while the buying and selling prices of the PGs (P78.73 and P93.00, respectively) were lower than those of traders (P89.17 and P105.25), PGs marketing margin was still higher. Likewise, the net return obtained by PGs, was on the average, higher (P16.51) than that of traders (P15.53). However, the high net return could not be attributed to the low marketing cost considering the limited nature of PG activities, volume handled, and area served.

Farmers' Income

On the average, farmer-members obtained higher net farm income than non-PG members both in terms of per farm and per hectare of commodity handled (Table 11.6). The leading income earners were the

Table 11.6. Comparison of net income between PG farmer-members and nonmembers by type of commodity handled (pesos).

Item	Member	Nonmember
Rice		
Per farm	30,693.00	14,950.75
Per ha	14,270.00	12,920.00
Per 100 kg	1.81	1.63
Sweetpotato		
Per farm	443.11	617.11
Per ha	1,704.27	1,210.02
Per 100 kg	0.76	0.39
Cassava		
Per farm	617.11	510.25
Per ha	1,210.02	1,242.76
Per 100 kg	0.39	0.38
Yellow Corn		
Per farm	9,483.00	5,573.00
Per ha	5,056.00	4,172.00
Per 100 kg	122.00	75.00
White Corn		
Per farm	6,466.00	5,270.00
Per ha	9,468.00	8,251.00
Per 100 kg	345.00	375.00
Onion		
Per farm	107,666.00	68,747.00
Per ha	74,332.00	72,886.00
Per 100 kg	1,423.00	825.00
Coconut		
Per farm	576.00	561.00
Per ha	313.00	207.00
Per 100 kg	160.00	152.00
Swine		
Per farm	16,755.00	14,176.00
Per ha	793.00	754.00
Per 100 kg	47.00	53.00

onion producers who netted P74,332/ha. Palay farmer-members ranked a far second with P14,270/ha.

The difference in farm incomes may be attributed to the PGs' capability to purchase the farmers' produce at higher prices than what the traders offered. Moreover, PG membership enabled the members to have access to both credit and technical assistance from the government. Such services were usually available to organized and formal groups such as cooperatives.

PG-Generated Benefits to Farmer-Members

Benefits derived by farmers from PG membership included dividends, patronage refunds, higher product price, lower input price, and lower interest on loans. When quantified, the total amount ranged from P103 to P15,202 per member in 1993 (Table 11.7).

Nonquantifiable Benefits

Farmer-members were given the chance to participate in meetings to express their needs and problems and interact with other members. They were also given the chance to attend meetings and seminars related to farming. However, not all members were satisfied with the services provided by PGs. They cited the PGs' inability to offer much higher prices on farm produce. They also cited the need for financial assistance, trainings, and access to marketing facilities which were lacking in most PGs.

Constraints and Coping Mechanisms of PGs

High amount of receivables and low loan repayments were the major problems faced by PGs. To cope with these problems, PGs tried to maintain competent officers and employees in charge of collection. Some PGs resorted to house-to-house collection.

Other problems included the lack of infrastructure facilities, e.g., storage and warehouse facilities. As such, goods had to be sold immediately to prevent spoilage. Most PGs also lack operational capital which was somehow resolved by borrowing from government banks and private lending institutions.

Policy Recommendations

The present study is an initial attempt to analyze PG marketing in the country. The study revealed that PGs are generally inefficient in their marketing operations because of the following: (a) inadequate capital for

Table 11.7. Amount of benefit generated by PGs for farmer-members

Commodity	Amount per Member (P)
Root Crops	1,832
Rice	2,622
Corn	103
Onion	15,202
Coconut	168
Fruits	
Cagayan Valley	274
Southern Mindanao	628
Central Mindanao	293
Swine	773
Cattle	3,464

procurement and investment in postharvest and transport facilities; (b) declining interest of members due to management problems within the organization; (c) limited volume of business; and (d) low and fluctuating prices. To improve PGs' marketing operations, there is a need for policy reforms to address these problems:

a. Financial institutions like the Land Bank of the Philippines (LBP) should provide the PGs financial assistance for procurement and construction and purchase of postharvest and marketing facilities. This will enable the PGs to expand their procurement operations and market their members' produce and,thus, provide them a bigger share of the market for agricultural commodities.

b. Entrepreneurial capability of PG management must be enhanced and leadership capabilities of the officers and members of the organization must be continuously upgraded. Seminars on value orientation must be provided to members to make them aware of their duties and responsibilities as PG members. These trainings can be handled by CDA and NGOs.

c. Since most PGs are small and not economically viable, it may be necessary to form a federation of PG in every province which will handle product procurement, processing, and distribution. The federation can also handle input procurement. Such activities can be handled by the CDA and DA.

d. In most cases, marketing costs incurred by PGs were higher than those of traders and this was partly due to high transport cost. Public sector spending on infrastructure facilities such as feeder roads must be pursued. In livestock marketing, establishment of auction markets in strategic places in the country is recommended along with rehabilitation of existing abbatoir and construction of new ones in areas without these facilities.

e. PGs must gain access to a good market information system. The market information and monitoring service of the Bureau of Agricultural Statistics (BAS) and Department of Trade and Industry (DTI) must be broadened to cover the entire country.

f. Quality management should be an important function of PGs. Quality improvement of agricultural products should be a top consideration for research and policy.

g. It has been alleged that one way of improving the income of farmers is by increasing the value added for their products. Yet the study showed that minimal processing was done by PGs. Hence, they should be encouraged to do more processing of members' produce; better yet if members can do the processing. This could mean additional employment and income to farmer-members and their families.

Along with the above recommendations, a continuing research effort in assessing PG marketing performance vis-a-vis the entire marketing system must be pursued. This can be undertaken by relevant institutions in the PCARRD National Agriculture and Resources Research and Development Network (NARRDN). CDA and PCARRD have signed a memorandum of agreement to enhance research and development efforts in cooperative development.

It is also suggested that a more focused support be made on policy analysis that will lead to the development of relevant programs designed to ensure long-term viability of farmers' organizations.

Further studies are recommended to assess the management of existing PGs and whether local capabilities are being used effectively.

Small farms will continue to dominate agricultural production in the Philippines. Thus, cooperatives and other forms of farmers' organizations will have to be tapped to support production and marketing of small farmers. More in-depth research on management and operations of

these organizations and the relationships with and attitudes of farmers is necessary.

Lastly, an improvement of database on PG and cooperatives engaged in marketing of agricultural commodities is necessary.